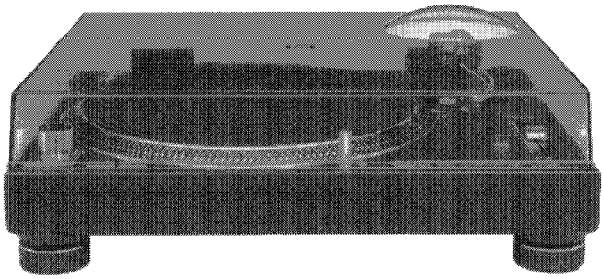
Service Manual

Turntable System

SL-1210M3D



Colour

(K).....Black Type

Areas

(E).....Europe.

(EB).....Great Britain.

(EG).....Germany and italy.

Please file and use this manual together with the service manual for Model No.SL-1200M3D(P) (Silver Type), Order No.AD9903091C1.

Specifications

nGeneral

Power supply:	AC 110-120/220-240V, 50Hz
Power consumption:	16W
Dimensions (W×H×D):	453×162×353 mm
Mass:	12kg

nTurntable section

Type:	Quarts direct drive Manual turntable
Drive method:	Direct drive
Motor:	Brushless DC motor
Turntable platter:	Aluminum diecast Diameter 332 mm Weight 1.7 kg
Turntable speeds:	33-1/3 r/min, 45 r/min
Starting torque:	1.5 kg-cm
Build-up characteristics:	0.7s. from standstill to 33-1/3 r/min
Braking system:	Electronic brake:
Wow and flutter:	0.01% W.R.M.S.* 0.025% W.R.M.S. (JIS C5521) ±0.035% peak (IEC 98A Weighted)

*This rating refers to turntable assembly alone, excluding effects of record, cartridge or tonearm, but including platter, Measured by obtaining signal from built-in frequency generator of motor assembly.

Rumble:	-56 dB (IEC 98A Unweighted) -78 dB (IEC 98A Weighted)

nTonearm section

Type:	Universal
Effectivelenghth:	230 mm
Arm height adjustment range:	0-6 mm
Overhang:	15 mm
Effective mass:	12 g (without cartridge)
Offset angle:	22°
Friction:	Less than 7mg (lateral, vertical)
Tracking error angle:	Within 2°32' (at the outer groove of 30cm record) Within 0°32' (at the inner groove of 30cm record)
Stylus pressure adjustment range:	0-4 g
Applicable cartridge weight range:	3.5-13 g 11-20.5 g (including headshell)
(with auxiliary weight);	9.5-13 g 17-20.5 g (including headshell)
(with shell weight);	3.5-6.5 g 11-14 g (including headshell)
Headshell weight:	7.5 g

Notes:

Specifications are subject to change without notice.

Mass and dimensions are approximate.

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

1 Note

- This simplified Service Manual is provided to indicate the main differences between the original model No. SL-1200M3D(P) (Silver Type) and the subsequent model No. SL-1210M3D(E, EB, EG)(Black Type).

2 Change in Replacement Parts List

Notes:

- Mentioned in this parts list is only those different from Model No. SL-1200M3D(P)(Silver Type).
  All other parts are the same as for SL-1200M3D(P)(Silver Type).
- Impotant safety notice:
  Components identified by ⚠ mark have special characteristics impotant for safety.
  Futhermore, special parts which have purposes of fireretardant (resistors), high-quality sound (capacitors), iow-noise (resistors), etc. are used.
  When replacing any of components, be sure to use only manufacture's specified parts shown in the parts list.
- The marking (RTL) indicates that the Retention Time is limited for this item. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time.
  The retention period of availability is dependant on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be avairable.
- The "<IA> <IB> <IC> <ID>" marks in Remarks indicate language of instruction manual.
  <IA>: Spanish, Polish, Czech <IB>: English <IC>: Germany, Italian, French <ID>: Duch, Danish, Swedish

Ref. No.	Change of Part No.		Part No. & Description	Remarks
	SL-1200M3D(P) (Silver)	**SL-1210M3D(E,EB,EG) (Black)**		
3	SFTE172-01Z	**SFTE172-01Z1**	TURNTABLE ASS'Y	
8	SFMZQ20-01A	**SFMZQ20-09A**	SHAFT ASS'Y	
9	RFKN1200M3DP	**RYQ0309-K**	POWER SW KNOB ASS'Y	
28	SFUP122-02E	**SFUP122-02A**	BRACKET, ILLUMINATOR	
40	RKM0101D-S	**RKM0101F-K**	CABINET	
41	SFUM172-04	**SFUM172-042**	ORNAMENT, ILLUMINATOR	
44	SFUP122M12E2	**SFUP122G11E**	AC CORD ASS'Y	⚠ (EB)
44	SFUP122M12E2	**SFUP122N11E**	AC CORD ASS'Y	⚠ (E,EG)
46	RGH0131-S1	**RGH0131-2K1**	ORNAMENT, PITCH CONTROL	
55	RGN1655-K	**RGN2025-K1**	NAME PLATE	(E,EG)
55	RGN1655-K	**RGN2026-K1**	NAME PLATE	(EB)
57	SFUP122-233	**SFUP122-23C**	SUPPORTER(A)	
71	RFKN1200MK2A	**RFKN1200MK2B**	ARM BASE ASS'Y	
77	P-AM18201K	**P-AM18202K**	TONEARM ASS'Y	
88	RJL2P001B12	**RJL2P009S12**	PHONO CORD	
105	RQLC0142	**---**	TECHNICS LABEL	
A1	RQT4912-P	**RQT5838-E**	O/I BOOK	(E) <IA>
A1	RQT4912-P	**RQT5839-B**	O/I BOOK	(E, EB) <IB>
A1	RQT4912-P	**RQT5840-D**	O/I BOOK	(EG) <IC>
A1	RQT4912-P	**RQT5841-H**	O/I BOOK	(EG) <ID>
A2	RQA0149	**---**	WARRANTY CARD	
A5	SFCZV8801	**SFCZV8801-1**	SCREW, CARTRIDGE	
A6	SFCZV9801	**SFCZV9801-1**	SCREW, CARTRIDGE	
A13	RQCB0391	**RQCB0169**	SERVICENTER LIST	
D203,204	SVDEBR5505S	**B3AAA0000478**	L.E.D.	
D205,206	SVDEBR5505S	**B3AAA0000478**	L.E.D.	
F1	---	**XBA2C025TB0**	FUSE	⚠
F2	---	**XBA2C10TB0S**	FUSE	⚠
N2	SFXGQ20-02	**SFXGQ20-021**	SCREW	

P1	RPG4326	**RPG5337**	PACKING CASE	(E, EG)
P1	RPG4326	**RPG5338**	PACKING CASE	(EB)
P3	SFHH122-02	**RPN0710**	CUSHION, REAR	(EB)
P4	SFHD122N05	**RPQ0365-1**	PAD, TOP	(EB)
R601	ERDS1FJ4R7	**ERC12UGK335D**	RESISTOR, 1/2W 3.3M	⚠ (EB)
S602	---	**SFDSHXW01317**	SW, VOLTAGE SELECTOR	⚠
VR201	EVMK3GA00B54	**D3BA9503A002**	VR, BRAKE ADJ.	
VR301	EVMH1GA00B23	**D3BA9202A002**	VR, PITCH CONTROL 0% ADJ.	
VR302	EVMK3GA00B54	**D3BA9503A002**	VR, PITCH CONTROL GAIN ADJ.	
PCB2	---	**REP2094-1**	PCB ASS'Y, DRIVE	(RTL)
PCB3	---	**SFDP122N12A**	PCB ASS'Y, STOROBE	(RTL)
PCB4	---	**REP2221A-2**	PCB ASS'Y, PITCH CONTROL	(RTL)
PCB5	---	**REP2093A**	PCB ASS'Y, POWER SUPPLY	(RTL) (E,EG)
PCB5	---	**REP2346A**	PCB ASS'Y, POWER SUPPLY	(RTL) (EB)

3 Caution for AC mains lead

(For United Kingdom)

("EB" area code model only)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 5-ampere fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.
Check for the ASTA mark or the BSI mark on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local dealer.

CAUTION!
IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.
THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.
If in any doubt please consult a qualified electrician.

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:
Blue: Neutral, Brown: Live.
As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black or Blue.
The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Brown or Red.

WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH THE LETTER E, BY THE EARTH SYMBOL ⏚ OR COLOURED GREEN OR GREEN/YELLOW.

THIS PLUG IS NOT WATERPROOF—KEEP DRY.

Before use

Remove the connector cover.

How to replace the fuse

The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.
Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.

Figure A

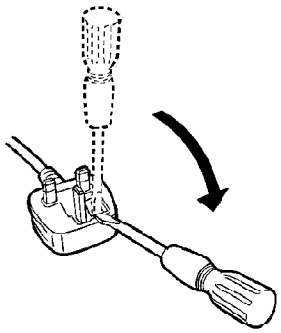
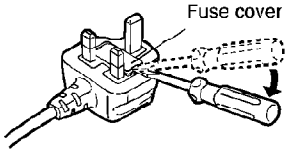


Figure B



2. Replace the fuse and close or attach the fuse cover.

Figure A

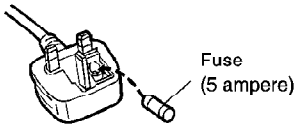
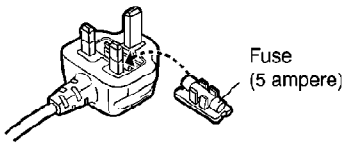
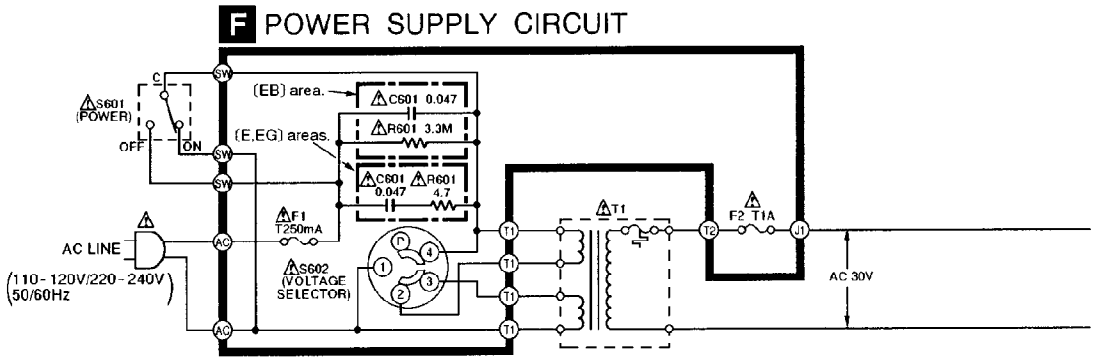


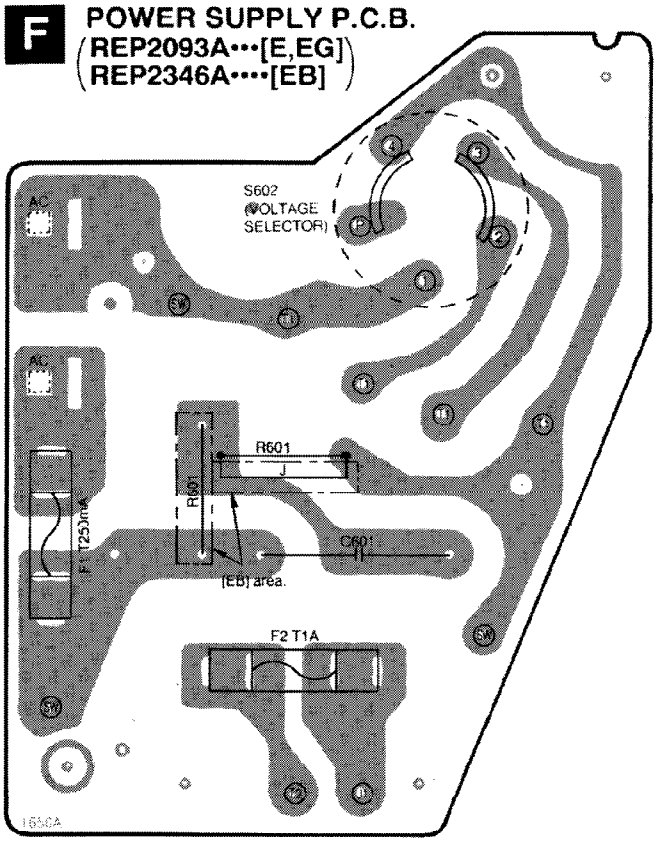
Figure B



4 Schematic Diagram



5 Printed Circuit Boards



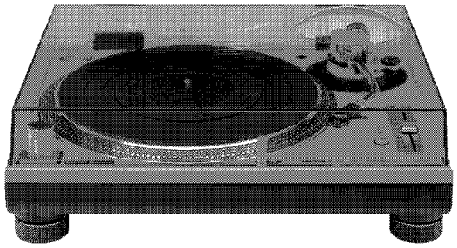
ORDER NO. AD9903091C1
A2

Service Manual

Direct Drive Turntable System

Turntable System

SL-1200M3D



Colour

(S).....Silver Type

Areas

(P).....U.S.A.

(PC).....Canada.

■ Specifications

■ General

Power supply:	AC 120V, 60Hz
Power consumption:	14W
Dimensions (WxHxD):	453 x 162 x 353 mm (17-27/32" x 6-12/32" x 13-29/32")
Weight:	12 kg (26.4 lb.)

■ Turntable section

Type:	Quarts direct drive Manual turntable
Drive method:	Direct drive
Motor:	Brushless DC motor
Turntable platter:	Aluminum diecast Diameter 332 mm (13-5/64") Weight 1.7 kg (3.74 lb.)
Turntable speeds:	33-1/3 rpm snd 45 rpm
Starting torque:	1.5 kg-cm (1.3 lb-in)
Build-up characteristics:	0.7s.ffrrom standstill to 33-1/3 rpm
Braking system:	Electronic brake
Wow and flutter:	0.01% W.R.M.S.* 0.025% W.R.M.S.(JIS C5521) +0.035% peak (IEC 98A Weighted)
Rumble:	–56 dB (IEC 98A Unweighted) –78 dB (IEC 98A Weighted)

*This rating refers to turntable assembly alone, excluding effects of record, cartridge or tonearm, but including platter.Measured by obtaining signal from built-in frequency generator of motor as sembly.

■ Tonearm section

Type:	Universal
Effective lenghth:	230 mm (9-1/16")
Arm height adjustment range:	0 – 6 mm
Overhang:	15 mm (19/32")
Effective mass:	12 g (without cartridge)
Offset angle:	22°
Friction:	Less than 7 mg (lateral, vertical)
Tracking error angle:	Within 2°32' (at the outer groove of 30 cm <12"> record) Within 0°32' (at the inner groove of 30 cm <12"> record)
Stylus pressure adjustment range:	0 4 g
Applicable cartridge weight range:	11 – 20.5 g (including headshell)
(with auxiliary weight);	9.5 – 13 g 17 – 20.5 g (including headshell)
(with shell weight);	3.5 – 6.5 g 11 – 14 g (including headshell)
Headshell weight:	7.5 g

Note:
Specifications are subject to change without notice.
Weight and dimensions are approximate.

⚠ WARNING

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■ Contents

	Page
• Safety Precaution	2
• Accessories	2
• Features	3
• Controls	3
• Preparation of the cartridge	3
• Putting the player together	4
• Connections and installation	5
• Preparatory adjustments	6,7
• Playing records	8
• Adjustments while using the unit	9
• Maintenance	10
• Product service	10
• Troubleshooting guide	11
• Operation Checks and Component Replacement Precedures	12–16
• Schematic Diagram	17–19
• Printed Circuit Boards	20–22
• Measurements and Adjustments	23
• Block Diagram	24
• Wiring Connection Diagram	25
• Repracement Parts List	26,27
• Cabinet Parts Location	28,29
• Packaging	30

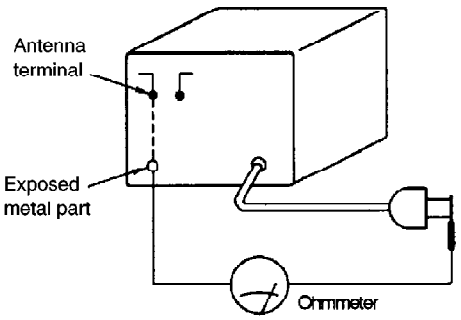
■ Safety Precaution (This "Safety Precaution" is applied only in U.S.A.)

1. Before servicing, unplug the power cord to prevent an electric shock.
2. When replacing parts, use only maanufaacturer's recomended components for safety.
3. Check the condition of the power cord. Replace if wear or damage is evident.
4. After servicing, be sure to restore the lead dress,Insulation barriers, Insulation papers, shields,etc.
5. Before returning the serviced equipment to the customer, be sure to make the following insulation resistance test to prevent the customer from being exposed to a shock hazard.

• INSULATION RESISTANCE TEST

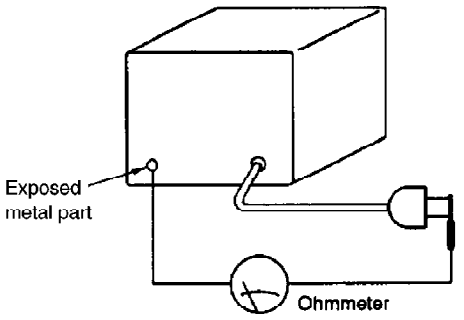
1. Unplug the power cord and short the two prongs of the plug with a jumper wire.
2. Turn on the power switch.
3. Measure the resistance value with ohmmeter between the jumpered AC plug and each exposed metal cabinet part, such as screwheads antenna, control shafts, handle brakets, etc. Equipment with antenna terminals should read between 3 MΩ and 5.2 MΩ to all exposed parts. (Fig. A) Equipment without antenna terminals should read approximately infinity to all exposed parts. (Fig. B)

Note: Some exposed parts may be isolated from the chassis by design. These will read infinity.



(Fig. A)

Resistance = 3 MΩ – 5.2 MΩ



(Fig. B)

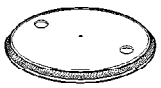
Resistance = Approx. ∞

4. If the measurement is outside the specified limits, there is a possibility of a shock hazard. The equipment should be repaired and rechecked before it is returned to the customer.

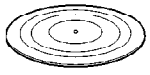
■ Accessories

(Only for U.S.A.)
To order accessories contact 1-800-332-5368 or web site (http: //www.panasonic.com).

Turntable.....1 pc.
(SFTE172-01Z)



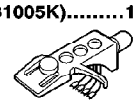
Turntable mat.....1 pc.
(RGS0008)



Disc slip sheet set.....1 pc.
(RGS0005Z)
•Disc slip sheet
•Transparent sheet

Dust cover.....1 pc.
(SFAD122-01A)

Shell with stylus weight
(SFPCC31005K).....1 pc.



Balance weight.....1 pc.
(SFPWG17201K)

Auxiliary weight.....1 pc.
(SFPWG17202)

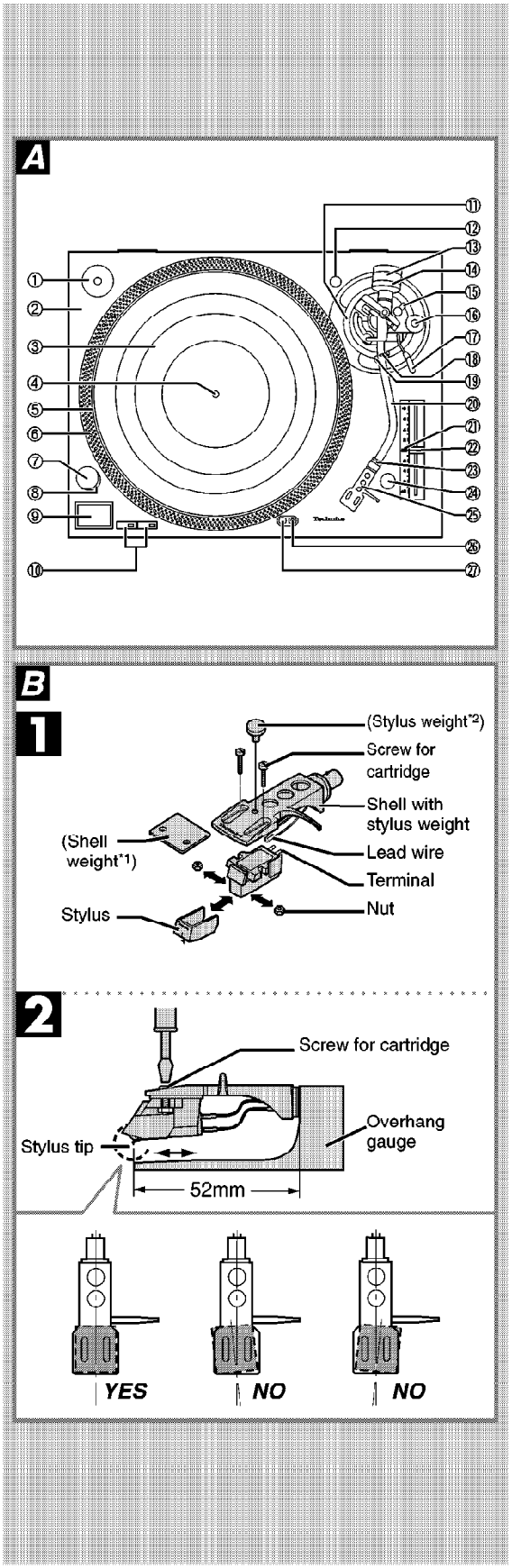
EP record adaptor.....1 pc.
(SFWE010)

Shell weight.....1 pc.
(SFPZB3501)

Overhang gauge.....1pc.
(SFK0135-01)

Screw set for cartridge.....1 pc.
•Nuts(RHN26003)
•Screws-short(SFCZV8801)
•Screws-long(SFPEV9801)
•Washers(SFPEW9601)

A cartridge is not included.



■ Features

A masterpiece amongst turntables with a worldwide reputation.

Pitch control reset button

- Pitch can be instantly reset to the rated speed (33 1/3 or 45 rpm).

Highly accurate turntable speed maintained continuously with a quartz pitch control

- The pitch can be varied between -8 and +8%, with accuracy maintained throughout the range.

The direct drive produces high torque

- Wow and flutter below 0.01%. Starting torque of 1.5 kg/cm enabling the turntable to reach 33 1/3 rpm in 0.7 seconds.
- Fully electric braking system.

Tone arm with gimbal suspension

- The tone arm can be finely adjusted in a range of 6 millimeters with the lockable height control.

Anti-vibration design with 3 layer cabinet construction and large insulating legs.

Pop-up stylus light.

■ Controls A

No.	Name	Reference page(s)
①	**EP record adaptor**	8
②	**Turntable base**	3
③	**Turntable mat (Or disc slip sheet)**	4
④	**Center spindle**	4
⑤	**Turntable**	4
⑥	**Strobe lights**	9
⑦	**Power switch (power)**	8
⑧	**Strobe illuminator/pilot lamp**	9
⑨	**Start/stop button (start - stop)**	8
⑩	**Speed select buttons (33, 45)**	8
⑪	**Arm-height control**	7
⑫	**Shell stand**	3
⑬	**Balance weight**	4
⑭	**Stylus pressure control**	6
⑮	**Arm lock**	7
⑯	**Anti-skating control**	6
⑰	**Cue lever**	6
⑱	**Arm clamp**	6
⑲	**Arm rest**	6
⑳	**Tone arm**	4
㉑	**LED indicator**	9
㉒	**Pitch control (Pitch adj.)**	9
㉓	**Locking nut**	4
㉔	**Reset button (reset)**	9
㉕	**Head shell**	3
㉖	**Stylus light switch**	8
㉗	**Stylus light**	8

■ Preparation of the cartridge B

1 Attach a cartridge (not included).

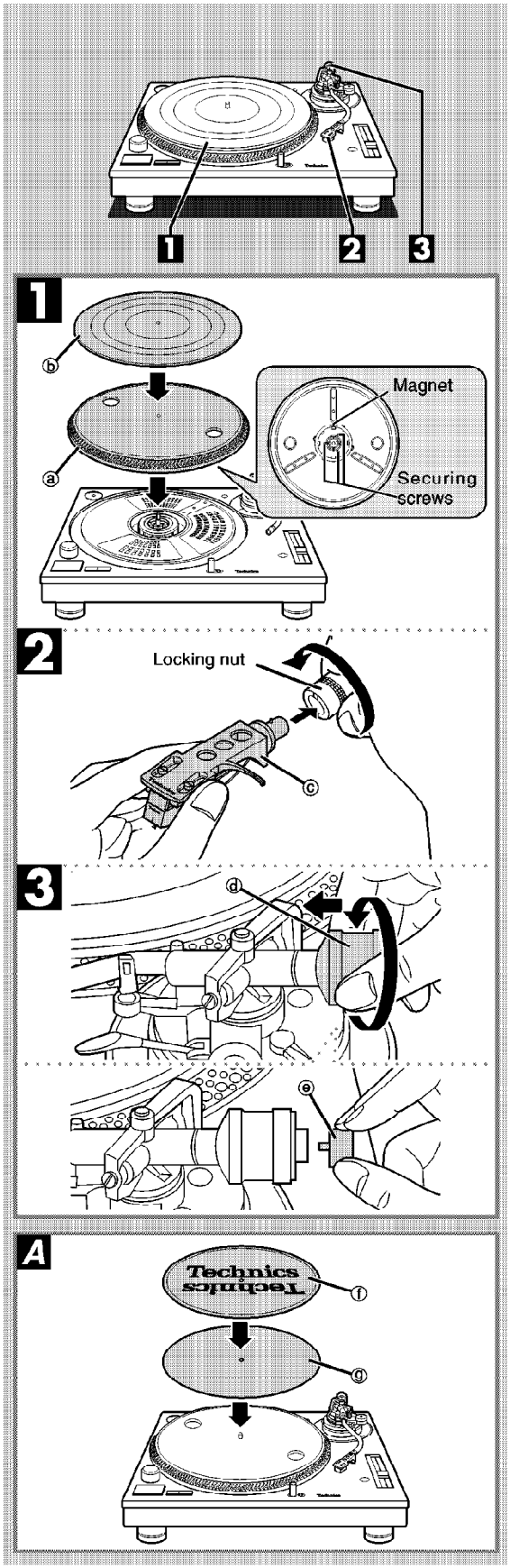
Follow the cartridge's instructions to correctly attach it to the head shell.

- Use the included shell weight *1 when using a light cartridge (3.5 to 6.5 grams).
- Use the stylus weight *2 to increase stylus pressure (➡ page 6). Leave it off until stylus pressure has been adjusted.

2 Adjust the overhang.

Fit the included overhang gauge to the head shell. Adjust the overhang and facing of the cartridge and tighten the screws.

- Line the point of the stylus up with the end of the gauge.
- The cartridge should be parallel on the shell head.



■ Putting the player together

Put the player together in the following order.
- Do not connect the AC power cord until set up is complete.
- Leave the dust cover off until set up and adjustments are complete.

1 Fit the turntable ⓐ and turntable mat ⓑ.

Put the turntable on the center spindle and then lay the mat on top.
- Be very careful when putting the turntable on the main unit. The magnet on the bottom of the turntable is finely adjusted and sharp contact can cause it to move and lead to poor operation. Ensure the magnet remains free from dust and iron particles.
- Do not adjust the screws attaching the magnet to the turntable. The rated performance of the unit cannot be guaranteed if the magnet is moved.

2 Attach the head shell ⓒ.

Fit the head shell into the tone arm, keep it horizontal and tighten the locking nut.

3 Attach the balance weight ⓓ to the rear of the tone arm.

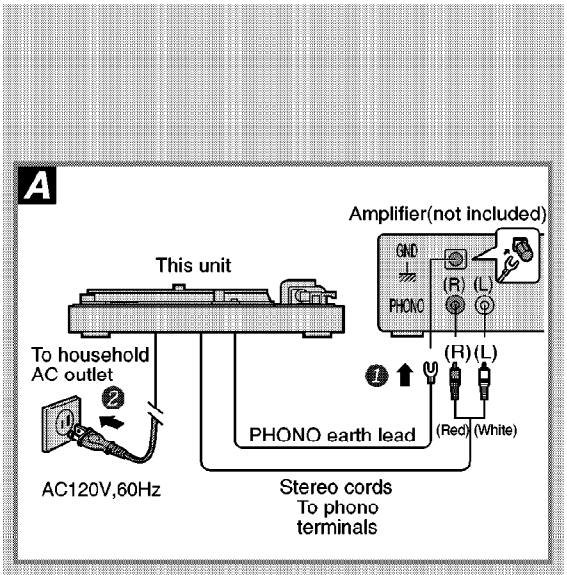
If the cartridge weighs between 10 and 13 grams, attach the included auxiliary weight ⓔ to the main balance weight.

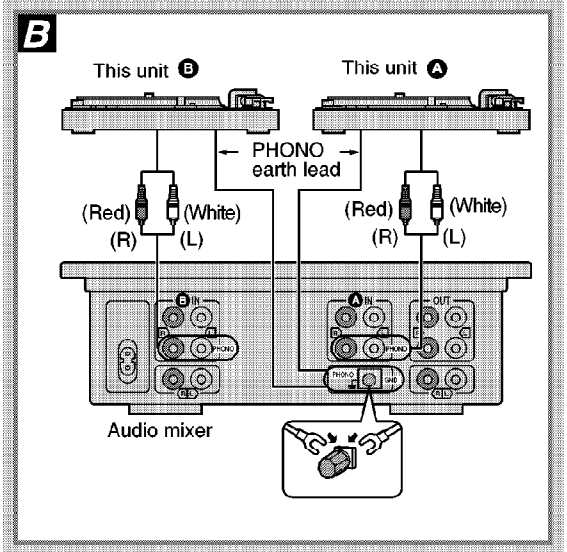
When the player is to be used for scratch play A

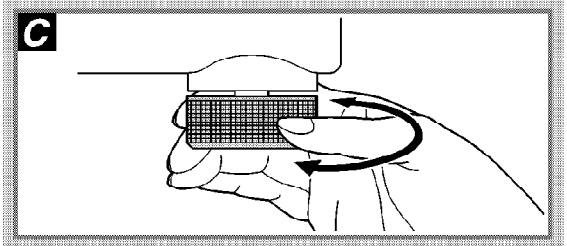
Use the disc slip sheet ⓕ instead of the turntable mat. This enables the record to be easily moved during play.
- •Top (printed side): Lay the record on this side.
- •Bottom: Slippery side.

For a different kind of slip

Put the transparent sheet ⓖ under the disc slip sheet.







■ Connections and installation

Connecting the stereo cords and AC power cord A

1 Connect the stereo cords and earth lead.
If the earth lead isn't connected, a hum will be heard from the AC power source.

2 Connect the AC power cord.
- Connect this cord only after all other connections are complete.
- Confirm the wattage of AC outlets on amplifiers and receivers before using them for this unit. This unit consumes 14 W.

Connection to the SH-DJ1200 Audio Mixer (not included) B

- Disconnect all units from the power source before making any connections.
- Reconnect the AC power cords after all other connections are complete.

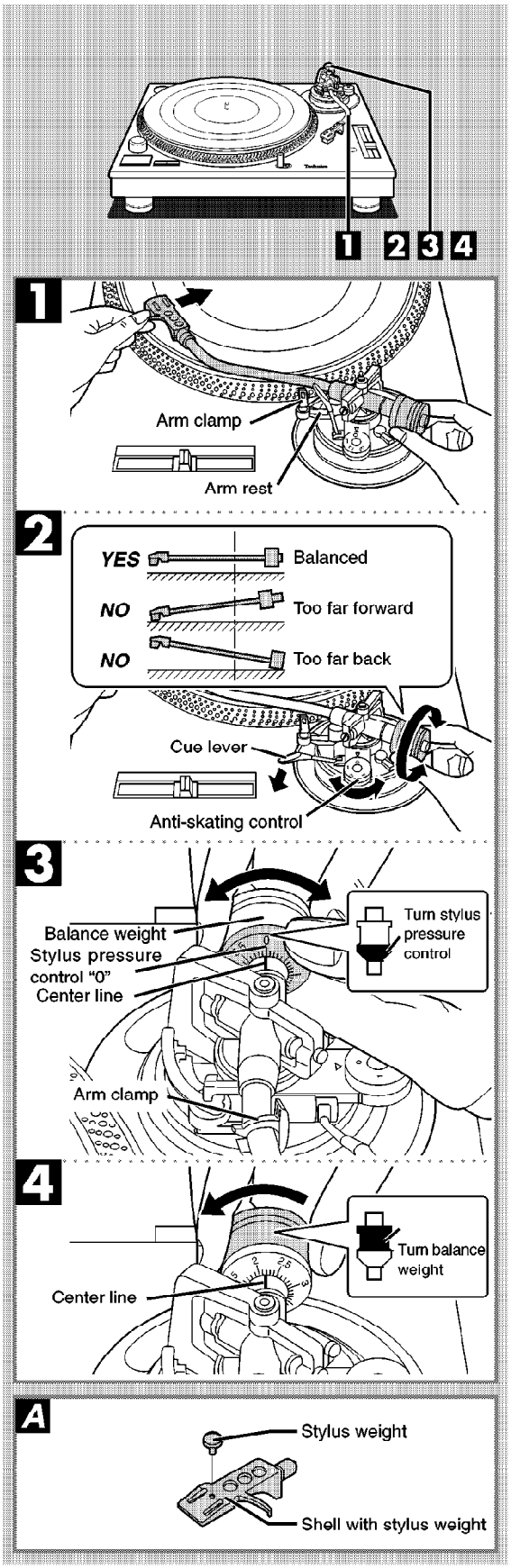
Installation

- Install the unit on a horizontal surface protected from vibrations.
- Keep this unit as far as possible from speakers.

Note
- Ensure the unit is not exposed to direct sunlight, dust, humidity, and heat from a heating appliance.
- This unit may pick up interference from a radio if there is one nearby. Keep radios as far as possible from this unit.

Adjusting the height of the insulators C

Place the unit where it is to be used and adjust the height of the legs to make the unit horizontal.



■ Preparatory adjustments

Horizontal balance and stylus pressure

1 Release the tone arm.

❶ Take care with the stylus and remove its cover, then release the arm clamp.

❷ Free the tone arm from the arm rest.

2 Adjust horizontal balance

❶ Push the cue lever down.

❷ Turn the anti-skating control to "0".

❸ Turn the balance weight until the arm is approximately horizontal.

Take care at this time not to allow the stylus to touch the unit.

3 Turn the stylus pressure control to "0"

❶ Return the tone arm to the arm rest and fix it with the arm clamp.

❷ Turn the stylus pressure control to "0".

Hold the balance weight still while doing this.

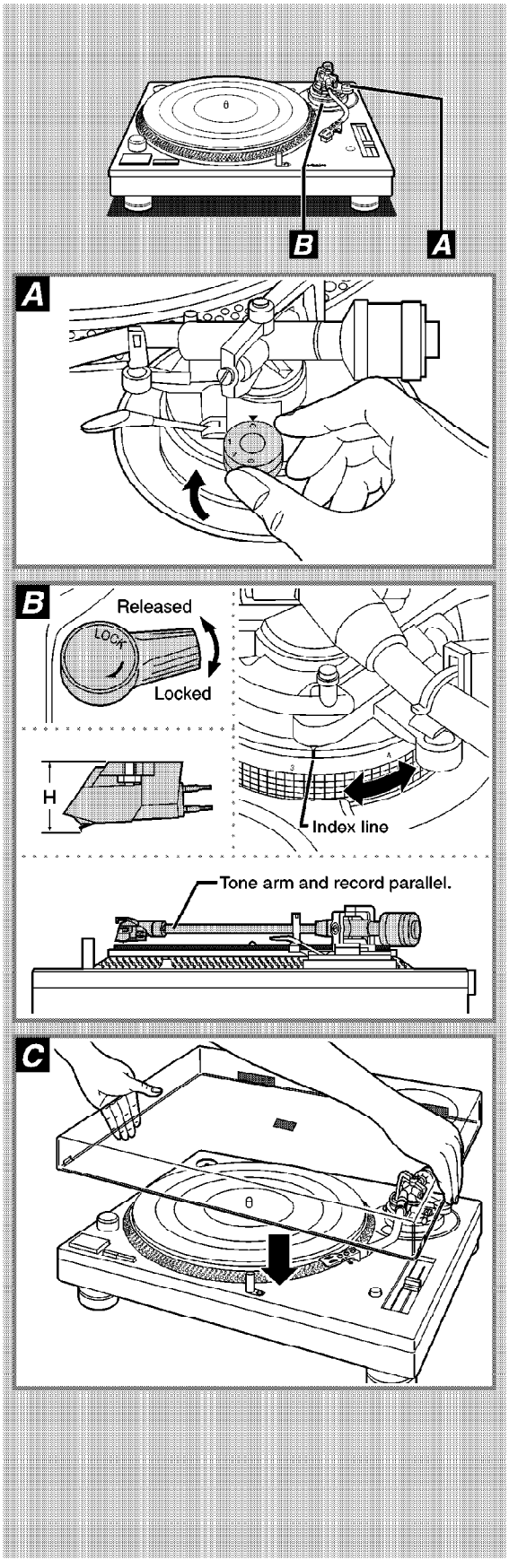
4 Adjust stylus pressure

Turn the balance weight to adjust to the appropriate pressure for the cartridge you are using.

See the cartridge's instructions for recommended stylus pressure. The stylus pressure control will turn at the same time. Stop when the center line points to the required pressure.

To increase stylus pressure for scratch play A

Use the stylus weight (included) to increase stylus pressure by 4 grams.



(Preparatory adjustments)

Anti-skating A

Adjust to the same value as the stylus pressure control.
If stylus pressure is over 3 grams, set this control to "3".

Tone arm height B

1 Release the arm lock.
2 Compare the height of your cartridge (H) with the following and set the arm height appropriately.

- Arm height is indicated in millimeters on the arm-height control, with marks indicating 0.5 millimeter intervals. Turn the control to the required height.

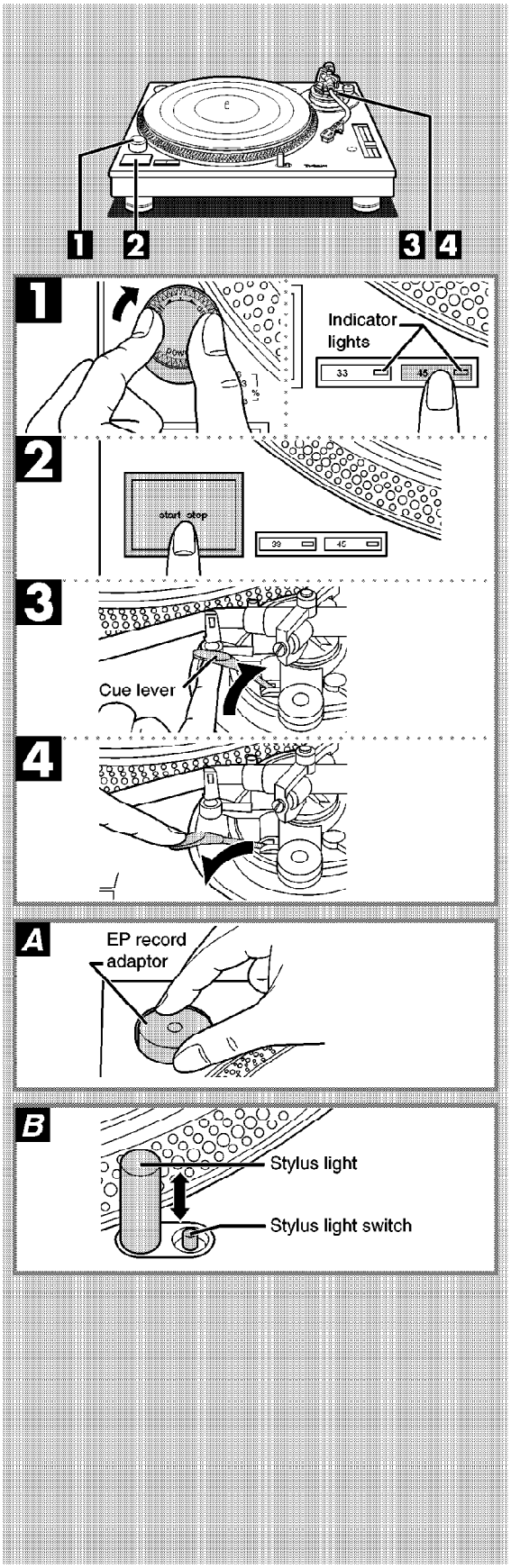
Cartridge height (H) in millimeters	Height control position
17	0
18	1
19	2
20	3
21	4
22	5
23	6

- If you do not know the height of your cartridge, rest the stylus on a record and adjust the height control until the tone arm is parallel with the record.

3 Lock the arm after adjusting the height.

Fit the dust cover C

Hold the dust cover with both hands and fit it over the player from directly above.



■Playing records

Preparation

1. Put a record on the turntable.
2. Take off the stylus cover and release the arm clamp.

1 Turn [power] to turn the unit on.

- The pilot lamp comes on.
- 33 1/3 rpm is automatically selected and the indicator lights.
- Press [45] if you are playing a 45 rpm record.

2 Press [start-stop].

The turntable starts revolving.

3 Lift the cue lever and move the tone arm over the record.

4 Lower the cue lever.

The tone arm moves down and play starts.

When play finishes

1. Lift the cue lever and move the tone arm back to the arm rest.
2. Press [start-stop].
   The electronic brake gently stops the turntable.
3. Turn [power] to turn the unit off.
4. Clamp the tone arm and put the stylus cover back on.

To temporarily stop play

Lift the cue lever.
The stylus lifts off the record.

When using EP records

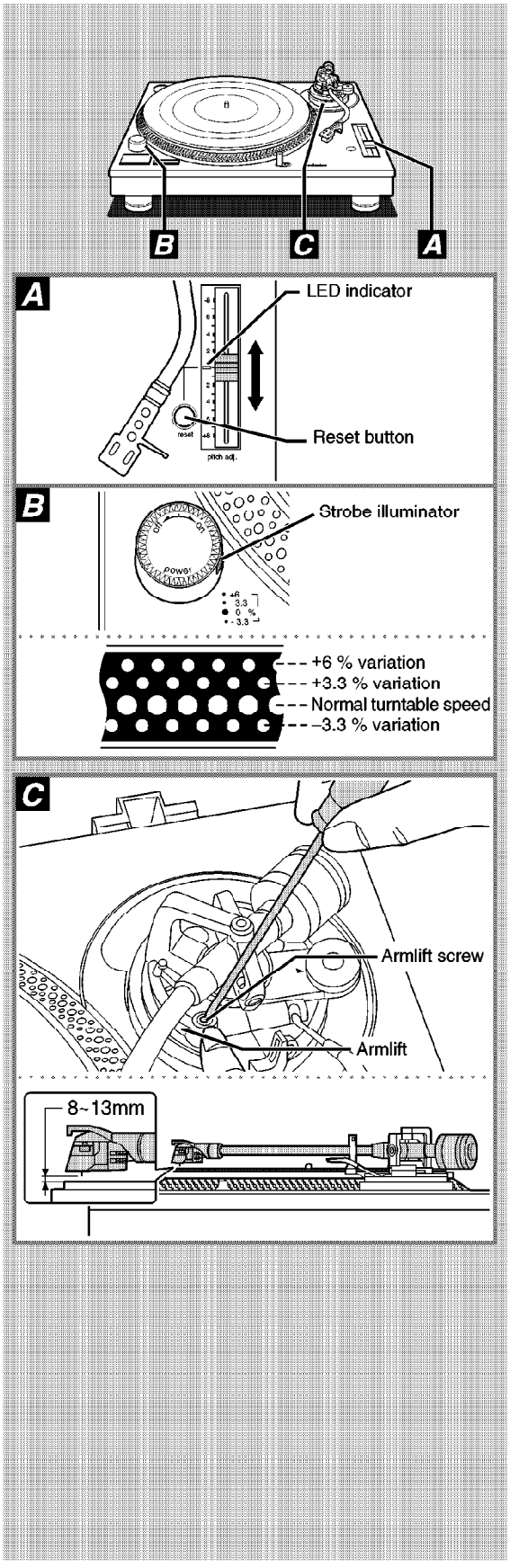
1. Take the adaptor out of its holder A and fit it over the center spindle.
2. Press [45] to change the speed.

To light up the stylus B

- Press the stylus light switch. The light rises up and illuminates the stylus.
- When the light is not required, press it down. The light also goes out.

Note

Press the switch firmly. If the switch is lightly pressed, the light may come on but not rise up.



■Adjustments while using the unit

Pitch control A

Fine adjustment to the number of revolutions per minute.

Slide [pitch adj.] while the turntable is revolving.

Move the indicator to the required position.
•The numbers represent approximate percentages.
•Pitch can be adjusted between -8% to +8%.

To reset pitch to the preset value

Press [reset].
The green lamp lights and the pitch immediately returns to the set value (33 1/3 or 45 rpm), regardless of any adjustments made with [pitch adj.].
Press [reset] again and pitch returns to the adjusted value.

To measure pitch B

The four rows of metal circles around the edge of the turntable can assist you in measuring pitch.
They are lit by the strobo light as they pass and each row appears to stand still at a different pitch.
Avoid using fluorescent light while measuring pitch. The timing will be put out and accuracy will be affected.

Armlift height C

Preparation

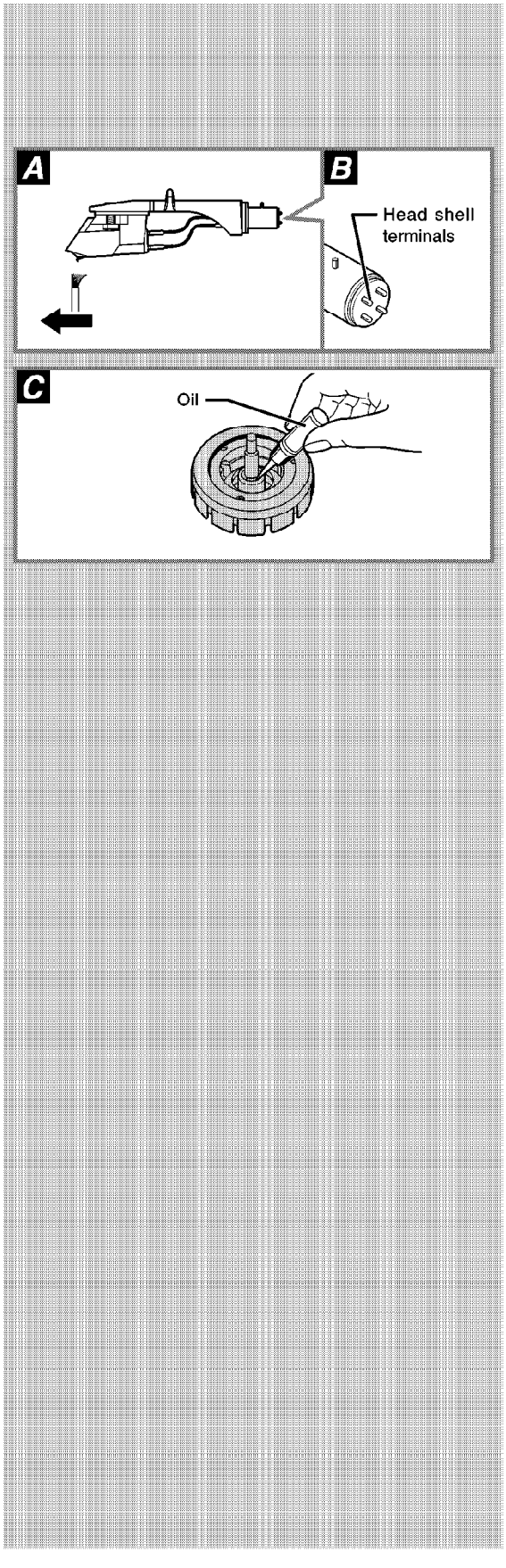
1. Put a record on the turntable.
2. Take off the stylus cover and release the arm clamp.

Use a screwdriver to turn the armlift screw.

Make this adjustment only if the cartridge you are using makes it necessary.
•Turning the screw clockwise lowers the armlift.
•Turning the screw anti-clockwise raises the armlift.

Note

Armlift height (the distance between the record and stylus when the cue lever is raised) is set to between 8 and 13 millimeters at time of shipment.



■Maintenance

Care of the parts

To clean this unit, wipe with a soft, dry cloth.
If the surfaces are extremely dirty, use a soft cloth dipped in a soap-and-water solution or a weak detergent solution.
- Never use alcohol, paint thinner, or benzine to clean this unit.
- Before using chemically impregnated cloth, read the instructions that came with the cloth carefully.

Note
Do not wipe the dust cover while playing a record.
This can cause static electricity. This static can cause the tone arm to be attracted towards the cover.

Thoroughly clean dust off the stylus and record.
- Use a soft brush to clean the stylus. Brush from the base to the tip. **A**
- Use a good quality record cleaner to keep your records clean.

Wipe the head shell terminals occasionally B
Use a soft cloth. Turn the amplifier off before fitting or removing the head shell.
- Damage to your speakers can occur if the head shell is moved while the volume is turned up.
- Leave the stylus cover on while handling the head shell to prevent damaging the stylus.

Oiling the center spindle. C
Apply 2 or 3 drops every 2000 hours of operation. Use SFW0010 oil (not included).

Moving the unit

Repackage the unit in the packaging it came in.
If you no longer have the packaging, do the following:
- Return the tone arm to the arm rest and tape it in place.
- Remove the balance weight and head shell from the tone arm and carefully wrap them.
- Take off the turntable and turntable mat and carefully wrap them.
- Carefully wrap the main unit in a blanket or paper.

■Product service

Do not attempt to remove the cover(s) or repair the unit yourself.
Refer servicing to qualified personnel only.

Product information
For product service, product information or assistance with product operation, refer to the servicenter directory.

■ Troubleshooting guide

Before requesting service for this unit, check the chart below for a possible cause of the problem you are experiencing. Some simple checks or a minor adjustment on your part may eliminate the problem and restore proper operation.
If you are in doubt about some of the check points, or if the remedies indicated in the chart do not solve the problem, refer to the directory of Authorized Service Centers (enclosed with this unit) to locate a convenient service center, or consult your dealer for instructions.

For detailed instructions, contact an authorized servicenter in the U.S.A. and Panasonic Canada Inc. Customer Care Centre in Canada.
In the U.S.A.1-800-211-7262 or web site (http://www.panasonic.com)
In Canada 905-624-5505 or web site (www.panasonic.ca)

Problem	Probable cause(s)	Suggested remedy	Reference page(s)
No power.	Is the AC power cord plugged in?	Plug the cord in firmly.	**5**
There is power but no sound.	Are connections to the amplifier or receiver correct?	Double check all connections.	**5**
Left and right sounds are reversed.	Are the stereo cord connections to the amplifier or receiver reversed?	Double check all connections.	**5**
Humming heard during play.	Are there other appliances or their power cords near the stereo cords?	Separate the appliances and their power cords from this unit.	—
	Is the earth lead connected?	Make sure the earth lead is correctly connected.	**5**

■ Operation Checks and Component Replacement Procedures

NOTE **1. This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.**

2. For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.

3. Select item from the following index when checks or replacement are required.

• Contents

■ Checking Procedures for each P.C.B. Page.

1. Checking for the drive control P.C.B. and power supply P.C.B.. . . . . 12.

■ Main Component Replacement Procedures

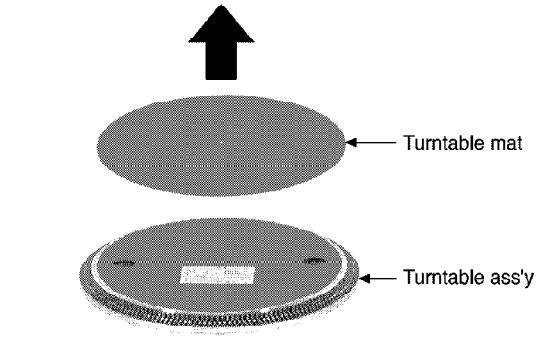
1. Replacement for the drive coil ass'y and FG coil ass'y. . . . . 13.
2. Replacement for the tonearm unit. . . . . 13~16.
3. Replacement for the lamp and stylus illuminator switch. . . . . 16.
4. Replacement for the parts mounted on speed selector P.C.B. and power switch. . . . . 16.

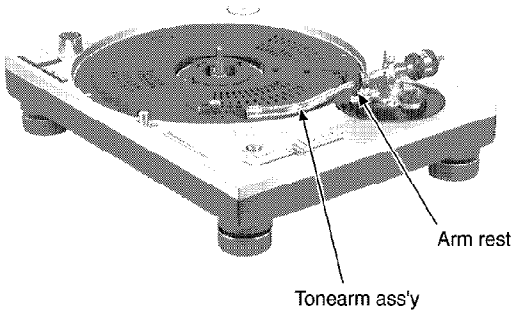
■ Checking Procedures for each P.C.B.

1. Checking for the drive control P.C.B. and Power supply P.C.B.

Step 1

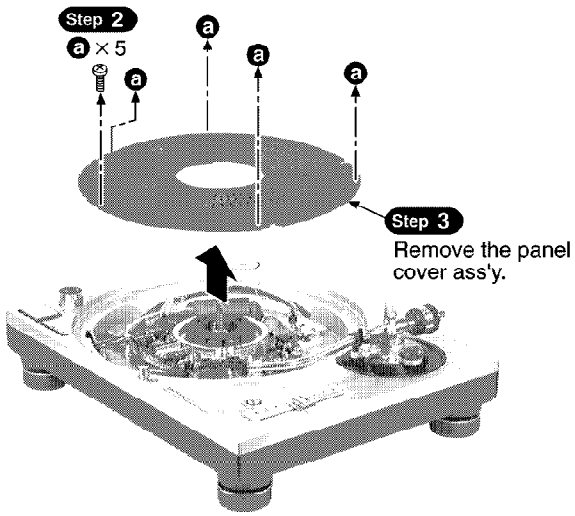
Remove the turntable mat and turntable ass'y.



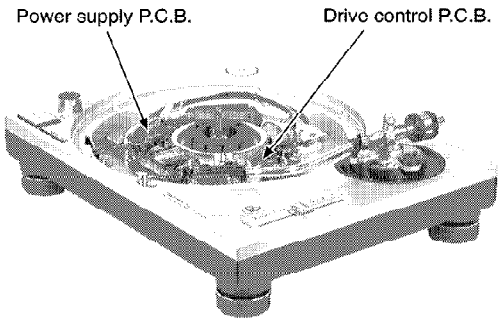


NOTE

1. The tonearm ass'y should be supported by arm rest.
2. Take care not to stick the dust or iron powder to the magnet attached to back inner side of turn table.



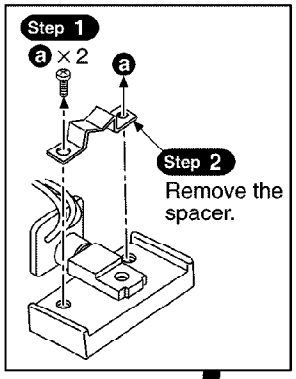
· Check the drive control P.C.B. and power supply P.C.B. as shown below.

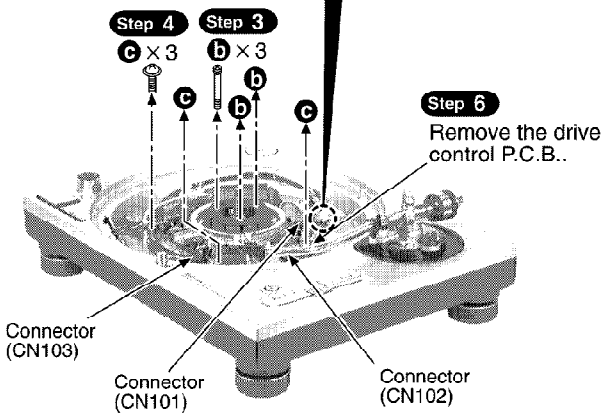


■ Main Component Replacement Procedures

1. Replacement for the drive coil ass'y and FG coil ass'y

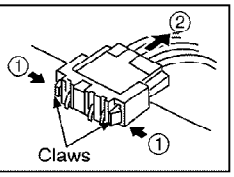
・Follow the Step 1 ~ Step 3 of the item 1 in checking procedure for each P.C.B. on page 12.

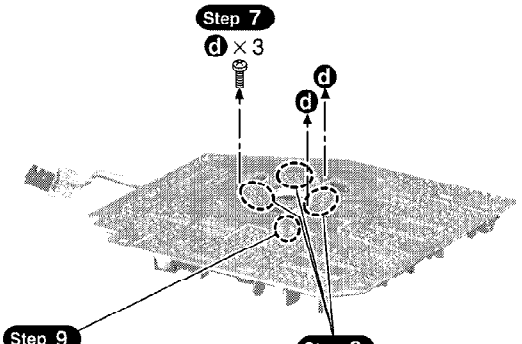


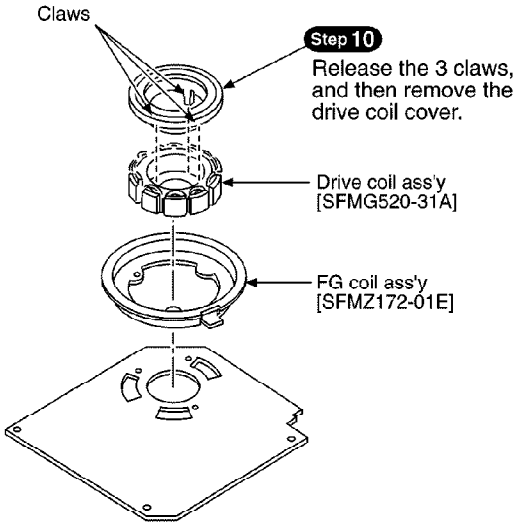


Step 5
Remove the 3 connectors.

Removal of the connector
・Release the claws, and then pull out the connector.





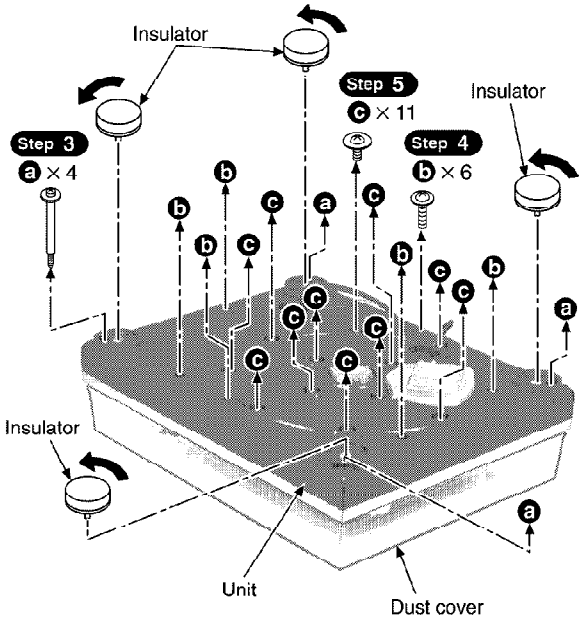

Claws
Step 10
Release the 3 claws, and then remove the drive coil cover.
Drive coil ass'y [SFMG520-31A]
FG coil ass'y [SFMZ172-01E]

2. Replacement for the tonearm unit

・Follow the Step 1 of the item 1 in checking procedure for each P.C.B. on page 12.

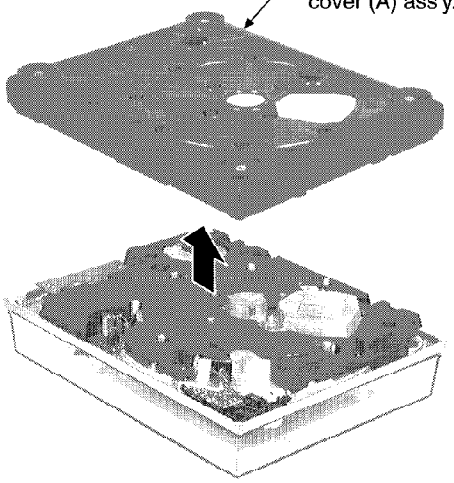
Step 1
Upset the unit, and then put the dust cover.

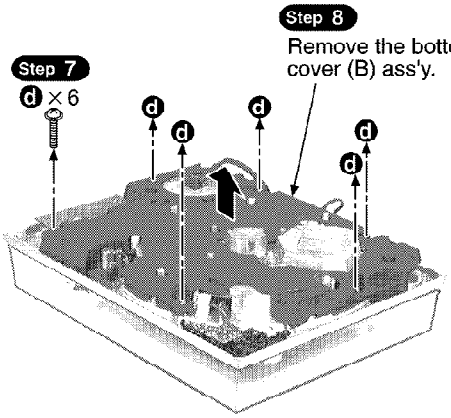
Step 2
Turn the insulators in the direction of arrow, and then remove them (4 points).

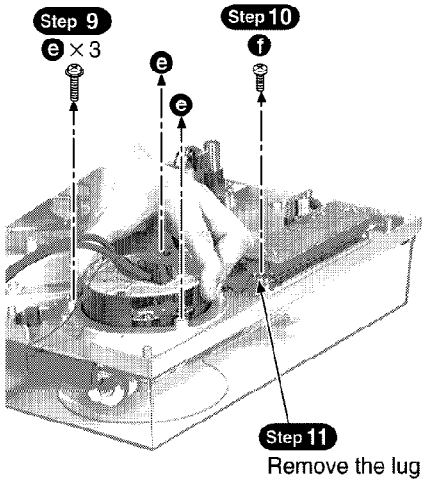


NOTE
Use the soft cloth under the unit to prevent damage the dust cover when servicing.

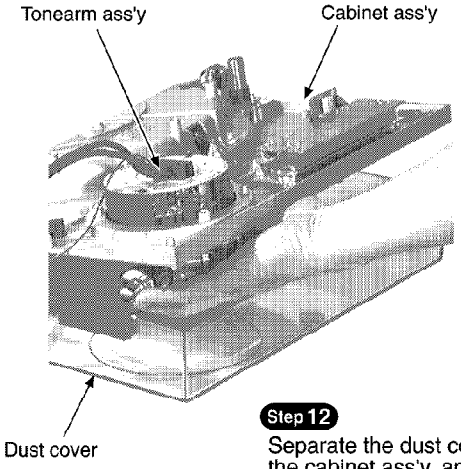
Step 6
Remove the bottom cover (A) ass'y.



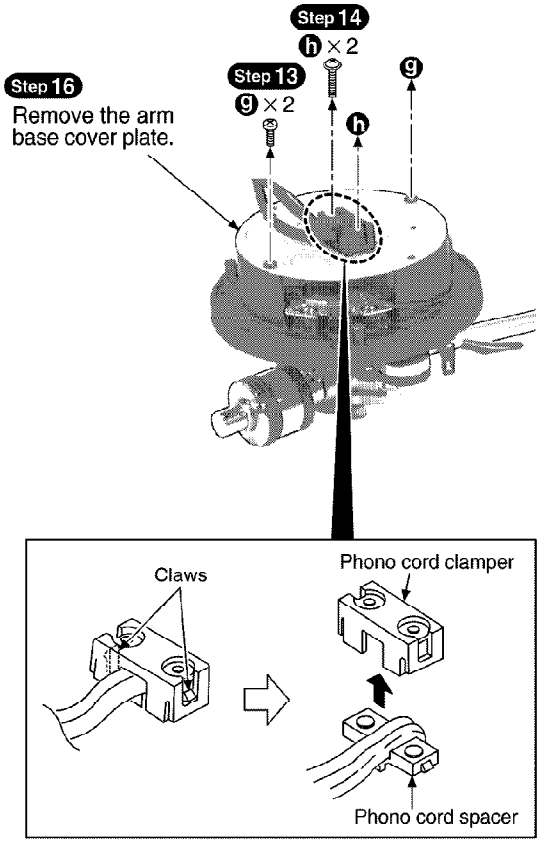




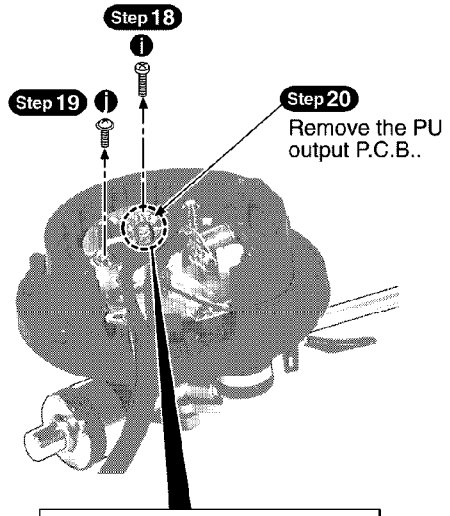
NOTE
Hold the tonearm with hand when removing the 3 screws (e).

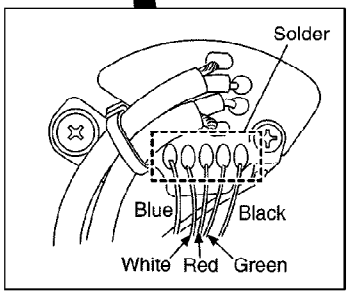


Step 12
Separate the dust cover and the cabinet ass'y, and then remove the tonearm ass'y.

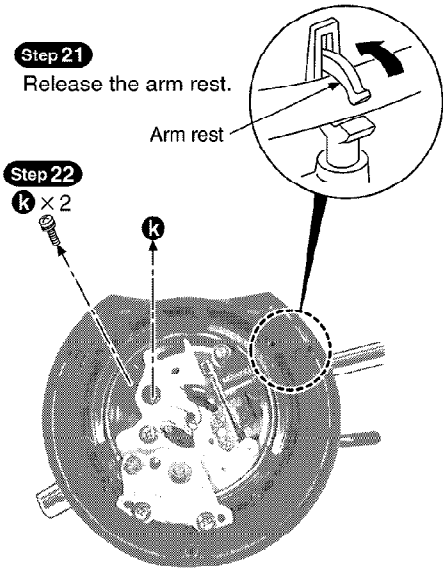


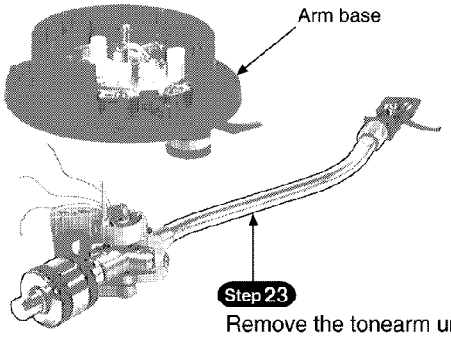
Step 15
Release the 2 claws, and then remove the phono cord clamper and phono cord spacer.





Step 17
Unsolder the terminals (5 points).

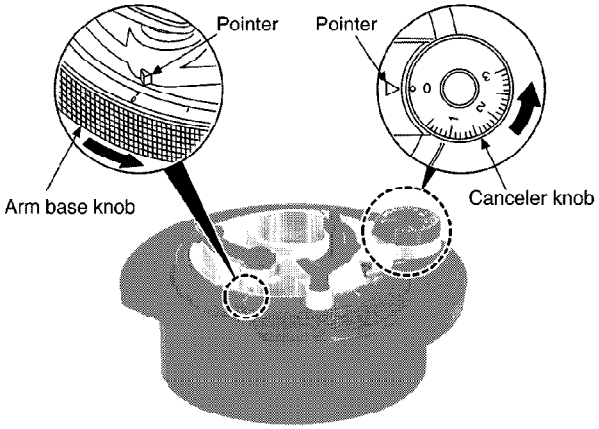




Reassembly procedures for tonearm ass'y

Step 1
Rotate the arm base knob in the direction of arrow, and then align the pointer with the scale "0".

Step 2
Rotate the canceler knob in the direction of arrow, and then align the pointer with the scale "0".

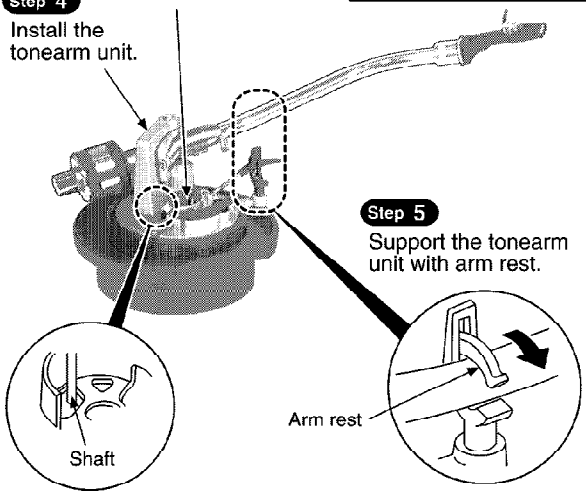


Step 3
Pass the 5 lead wires through the hole of arm basement.

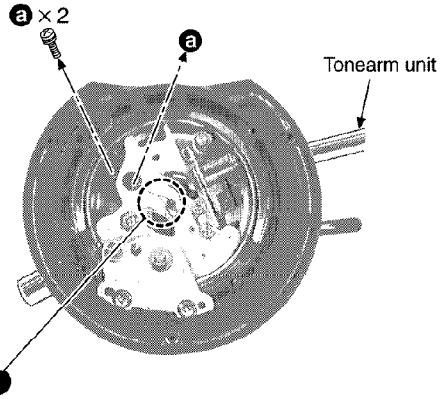
※ When passing the lead wire through the hole, for easy operation, wrap the ends of 5 lead wires with tape.

Step 4
Install the tonearm unit.

Step 5
Support the tonearm unit with arm rest.



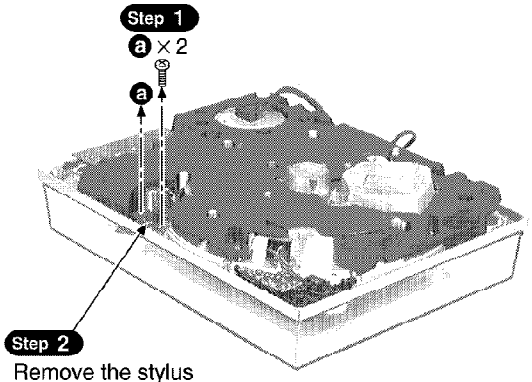
Step 6
Tighten the tonearm unit screws.



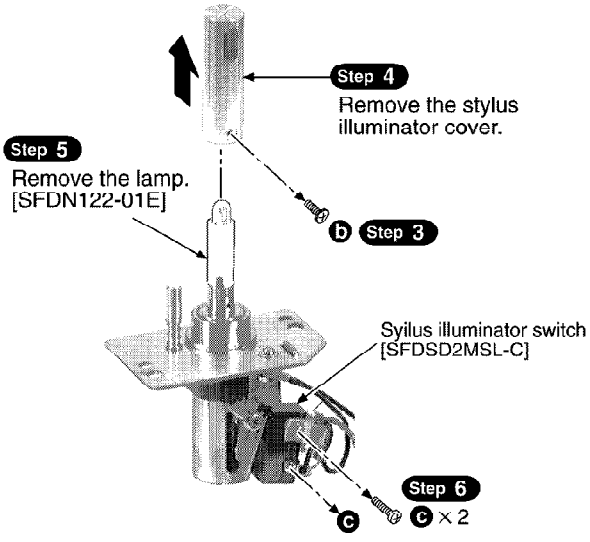
Remove the tape of lead wire.

3. Replacement for the lamp and stylus illuminator switch

- Follow the Step 1 ~ Step 6 of the item 2 in main component replacement procedures on pages 13 and 14.

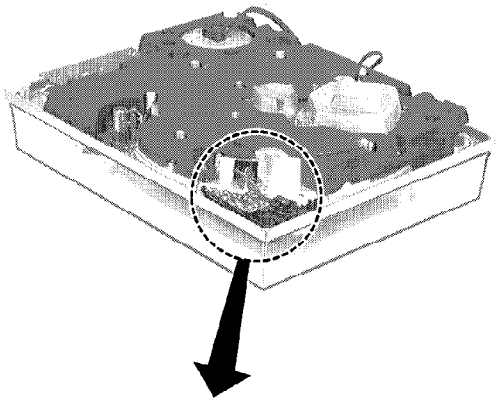


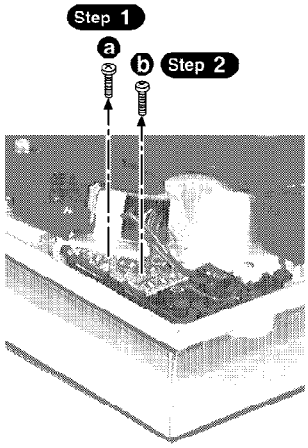
Remove the stylus illuminator unit.

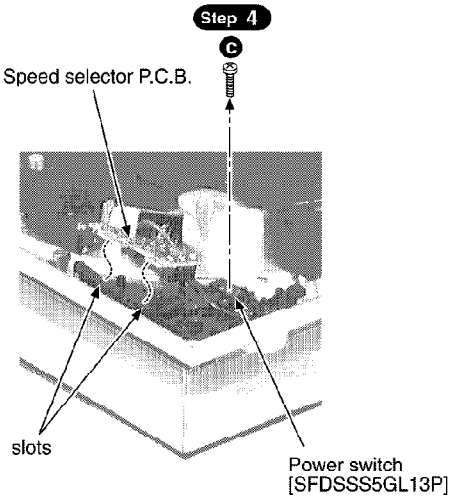


4. Replacement for the parts mounted on speed selector P.C.B. and power switch

- Follow the Step 1 ~ Step 7 of the item 2 in main component replacement procedures on pages 13 and 14.







Step 3
Remove the speed selector P.C.B..

■ Replacement Parts List

Notes: * Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety.
Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
When replacing any of components,be sure to use only manufacture's specified parts shown in the parts list.
* All parts are supplied by MESA.
* The "<IA> <IB>" maarks in Remarks indicate language of operating instructions.
<IA> : English
<IB> : Canadian French

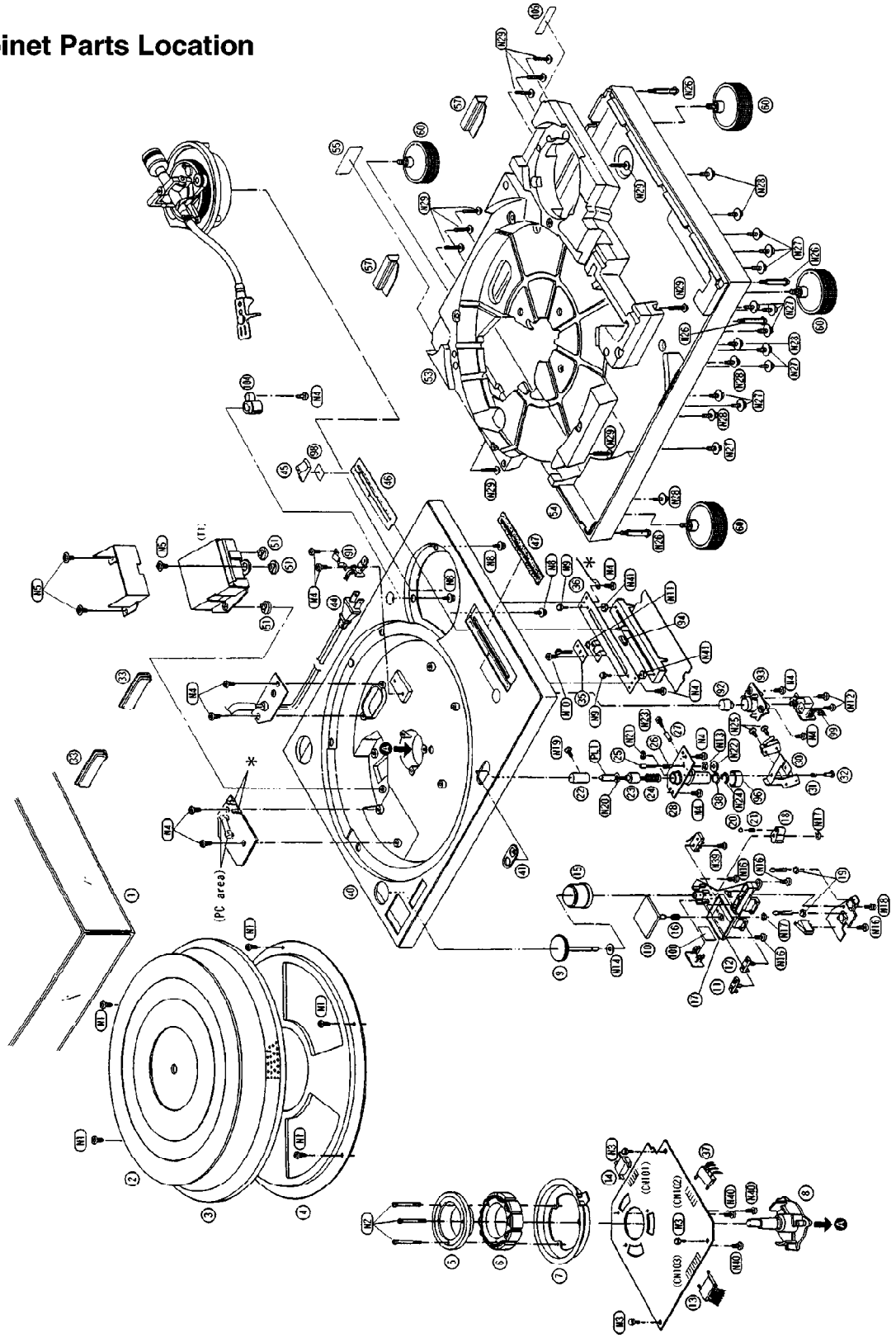
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	SFAD122-01A	DUST COVER	1	
2	RGS0008	T/T RUBBER MAT	1	
3	SFTE172-01Z	TURNTABLE ASS'Y	1	
4	SFUM172-053	PANEL COVER	1	
5	SFMGQ20-01	DRIVE COIL COVER	1	
6	SFMG520-31A	DRIVE COIL ASS'Y	1	
7	SFMZ172-01E	FG COIL ASS'Y	1	
8	SFMZQ20-01A	SHAFT ASS'Y	1	
9	RFKN1200M3DP	POWER SW KNOB ASS'Y	1	
10	SFKT015-061	BUTTON,START/STOP	1	
11	SFKT015-011E	BUTTON,SPEED SELECTOR(33)	1	
12	SFKT015-021E	BUTTON,SPEED SELECTOR(45)	1	
13	SFDJ122-02E	WIRE ASS'Y	1	
14	SFDJ122-06E	WIRE ASS'Y	1	
15	RGK0942Z-S	COVER,STROBE ILLUMINATOR	1	
16	SFQA122-01	SPRING	1	
17	RMR1111A-K	BASE,OPERATION	1	
18	SFUM122-03	CAM,POWER SWITCH	1	
19	SFUM015-11	SPACER,LED	2	
20	SFYB5-32	BALL	1	
21	SFQA520-01	SPRING	1	
22	SFKK172-01	COVER,STYLUS ILLUMINATOR	1	
23	SFXB122-06	DRIVE BOSS	1	
24	SFQA172-01	SPRING	1	
25	SFXJ172-01	PIN,LOCK CANCELER	1	
26	SFQA520-011	SPRING	1	
27	SFX0172-01-1	PIN,GUIDE	1	
28	SFUP122-02E	BRACKET,ILLUMINATOR	1	
30	SFUP122-03	PLATE,LOCK OPERATION	1	
31	SFQA122-02	SPRING	1	
32	SFXJ172-05	PIN	1	
33	RMG0483-K	RUBBER,DUST COVER	2	
35	SFUP122-09	HOLDER,LED	1	
36	SFUP122-01	BRACKET,PITCH CONTROL	1	
37	SFDJ122-04E	WIRE ASS'Y	1	
38	SFUP122-15-1	STOPPER,SPRING	1	
40	RKM0101D-S	CABINET	1	
41	SFUM172-04	ORNAMENT,ILLUMINATOR	1	
44	SFUP122M12E2	AC CORD ASS'Y	1	
45	SFKT122-02	KNOB,PITCH CONTROL	1	
46	RGH0131-S1	ORNAMENT,PITCH CONTROL	1	
47	SFUZ122-01	FELT	1	
51	SFGC122-01	RUBBER	3	
53	SFAU122-032	BOTTOM COVER B	1	
54	SFAU122-022	BOTTOM COVER A	1	
55	RGN1655-K	NAME PLATE	1	P
55	RGN1656-K	NAME PLATE	1	PC
57	SFUP122-233	SUPPORTER(A)	2	
60	SFGC122-04E	INSULATOR	4	
70	SFPRT17201K	ARM REST	1	
71	RFKN1200MK2A	ARM BASE ASS'Y	1	
73	SFPKD12201	BRACKET,ARM BASE	1	
74	SFPAB17206	KNOB,ANTI-SKATING CONTROL	1	
76	SFPCC31005K	HEAD SHELL	1	
76-1	REZ1037-1	WIRE KIT	1	
77	P-AM18201K	TONEARM ASS'Y	1	
78	SFPWG17201K	BALANCE WEIGHT	1	
79	SFPRT18201K	ARM LIFT	1	
80	SFQA829-03	SPRING	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
81	SFPAB13202	KNOB,LIFT	1	
82	SFPAB18201K	TONEARM FIXING PLATE	1	
83	SFPJL18202K	OIL DAMPER	1	
84	SFPZB12201K	PLATE	1	
85	SFPZB12203	PLATE,ARM BASE COVER	1	
86	SFUM170-06	SPACER,PHONO CORD	1	
87	SFPZB12204	CLAMPER,PHONO CORD	1	
88	RJL2P001B12	PHONO CORD	1	
89	SFEL026-01E1	GROUND WIRE	1	
90	SFPZB17202	KNOB,ARM LOCK	1	
91	N092	SPACER	1	
92	RGU0611-S	BUTTON,PITCH CONT.RESET	1	
93	RMR0945-K	PLATE,PITCH CONTROL RESET	1	
94	RMX0124	SPACER	1	
96	SFGZ122-021	RUBBER	1	
98	SFXW172-032	SPACER,PITCH CONTROL	1	
99	REZ0836	FLAT CABLE	1	
101	SFUZ122-04	SHEET	1	
104	RMR1112-K	SHELL STAND	1	
105	RQLC0142	TECHNICS LABEL	1	
A1	RQT4912-P	O/I BOOK	1	P,PC <IA>
A1	RQT4913-C	O/I BOOK	1	PC <IB>
A2	RQA0149	WARRANTY CARD	1	P
A2	SQX7183	WARRANTY CARD	1	PC
A3	SFWE010	EP record ADAPTOR	1	
A4	RHN26003	NUT,CARTRIDGE	2	
A5	SFCZV8801	SCREW,CARTRIDGE	2	
A6	SFPEV9801	SCREW,CARTRIDGE	2	
A7	SFPEW9601	WASHER	2	
A8	SFPZB3501	SHELL WEIGHT	1	
A9	SFPWG17202	AUXILIARY WEIGHT	1	
A10	SFK0135-01	OVERHANG GAUGE	1	
A11	RGS0005Z	DISC SLIP SHEET ASSY	1	
A12	RQLC0142	TECHNICS LABEL	1	
A13	RQCB0391	SERVICENTER LIST	1	P
A13	RQCB0832	SERVICENTER LIST	1	PC
⚠C1	ECA1HM471S	50V 470U	1	
C2	RCE1EU330BV	25V 33U	1	
C3	ECEA1EKA220B	25V 22U	1	
⚠C5,6	ECQM1223KZ3	125V 0.022U	2	
C101-03	RCE1EU330BV	25V 33U	3	
C104-07	ECQV1H104JM3	50V 0.1U	4	
C108	ECA1EM101	25V 100U	1	
C109,10	ECQV1H104JM3	50V 0.1U	2	
C111	ECQD1H562JF3	50V 5600P	1	
C112	RCE1HKA4R7BG	50V 4.7U	1	
C201	RCE1AKA330BG	10V 33U	1	
C202,03	ECEA1HKS010	50V 1U	2	
C204	ECQV1H473JM3	50V 0.047U	1	
C205	ECA0JM221	6.3V 220U	1	
C206	ECEA1HKS010	50V 1U	1	
C207	ECCR1H101K5	50V 100P	1	
C208	ECCR1H220KU5	50V 22P	1	
C209	RCE1AU101BV	10V 100U	1	
C210,11	ECQV1H224JM3	50V 0.22U	2	
C212	RCE1HKA3R3BG	50V 3.3U	1	
C213	ECCR1H471K5	50V 470P	1	
C214	RCE1AU101BV	10V 100U	1	
C215	ECEA1HKS010	50V 1U	1	
C216	RCE1AKA470BG	10V 47U	1	
C217-19	ECFR1H104ZF	50V 0.1U	3	
C301	ECQK1333GZ	125V 0.033U	1	
C302	ECQK1682GZ	125V 6800P	1	
C303	ECEA1HKS010	50V 1U	1	
C304	RCE1CKA100BG	16V 10U	1	
C305	ECQB1H122JF3	50V 1200P	1	
C306	ECEA1HKS010	50V 1U	1	
⚠C601	ECQU2A473MY	100V 0.047U	1	
CN101	EMCS0360L	CONNECTOR(3P)	1	
CN102	EMCS0460L	CONNECTOR(4P)	1	
CN103	EMCS0760L	CONNECTOR(7P)	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
⚠D1	D2SBA20	DIODE	1	
⚠D3	MA4051M	DIODE	1	
D201,02	SVDPR3902S-9	LED	2	
D203,04	SVDEBR5505S	LED	2	
D204A	MA165	DIODE	1	
D205,06	SVDEBR5505S	LED	2	
⚠D301	MA4051M	DIODE	1	
D301A	GL8EG21	LED	1	
⚠F1	XBA1F12NU14	FUSE	1	PC
IC101	AN6675	IC,TURNTABLE DRIVE	1	
IC201	AN6680	IC,CONTROL	1	
IC301	AN6682	IC,PITCH CONTROL	1	
IC302	TC4011BP	IC,P.CONT.ON/OFF SELECT	1	
N1	XTN3+8JFZ	SCREW	5	
N2	SFXGQ20-02	SCREW	3	
N3	XTW3+8T	SCREW	4	
N4	XTB3+8J	SCREW	13	
N5	SFXG172-01	SCREW	3	
N8	SNSB10	SCREW	3	
N9	XYN3+C6S	SCREW	2	
N10	XTN3+6J	SCREW	4	
N11	XWE4D10BW	WASHER	1	
N12	XTBS26+8J	SCREW	2	
N13	XUC25FY	WASHER	2	
N14	SFXW910J02	WASHER	1	
N16	XTB3+10JFZ	SCREW	4	
N17	XUC3FY	WASHER	2	
N18	XTV3+8G	SCREW	1	
N19	XSN17+3FY	SCREW	1	
N20	SFXW122-03	WASHER	1	
N21	XUC2FT	WASHER	1	
N22	XWE3D8	WASHER	1	
N23	XYN3+C15S	SCREW	1	
N24	RTW-12	WASHER	1	
N25	XSN2+10	SCREW	2	
N26	SFXG122-01	SCREW	4	
N27	SFXG122-02	SCREW	11	
N28	SNSB9-2	SCREW	6	
N29	XTW3+15T	SCREW	10	
N31	SFXG829-1	SCREW	1	
N32	XYN3+C10S	SCREW	2	
N33	XTW3+6T	SCREW	3	
N34	XWE4A10BW	WASHER	1	
N35	XTN3+25J	SCREW	1	
N36	XTB3+6JFZ	SCREW	2	
N37	XTW3+12TFZ	SCREW	2	
N38	XTN3+8J	SCREW	1	
N39	XTV23+10G	SCREW	1	
N40	XTN2616J	SCREW	3	
N41	XWE3F6	WASHER	2	
N42	XUC5FY-V	WASHER	1	
N43	SFPEW17201	WASHER	1	
N44	XTW26+6S	SCREW	1	
P1	RPG4326	PACKING CASE	1	
P2	SFHH122-011	CUSHION,FRONT	1	
P3	SFHH122-02	CUSHION,REAR	1	
P4	SFHD122N05	PAD,TOP	1	
P5	SFHD122-02	PAD(A)	1	
P6	RPN0306	PAD(B)	1	
P7	RPH0133	PROTECTION SHEET	1	
P8	SFHZ122-01	PROTECTION SHEET	1	
P9	XZB60X65A01X	PROTECTION BAG	2	
P10	XZB45X50A01X	PROTECTION BAG	1	
P11	SFYF09A15	PROTECTION BAG	2	
P12	XZB05X06C03	PROTECTION BAG	2	
P14	XZB25X34C03X	POLYETHYLENE COVER	1	
P17	RPQ0608	PAD,TONEARM	1	
PL1	SFDN122-01E	LAMP	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
⚠Q1	2SD1265-0	TRANSISTOR	1	
⚠Q2,3	2SD637-QRS	TRANSISTOR	2	
⚠Q201	2SC1846-QRS	TRANSISTOR	1	
Q202	2SD637-QRS	TRANSISTOR	1	
Q203	2SC2458GR	TRANSISTOR	1	
R1	ERDS2FJ562	1/4W 5.6K	1	
R2	ERDS2FJ682	1/4W 6.8K	1	
R3	ERDS2FJ272	1/4W 2.7K	1	
R4,5	ERDS2FJ471	1/4W 470	2	
R101	ERDS2FJ103	1/4W 10K	1	
R102	ERX1SJ4R7	1W 4.7	1	
R103	ERDS2FJ472	1/4W 4.7K	1	
R104	ERDS2FJ473	1/4W 47K	1	
R105	ERDS2FJ103	1/4W 10K	1	
R106	ERDS2FJ150	1/4W 15	1	
R107	ERX1ANJ1R5H	1W 1.5	1	
R108	ERDS2FJ103	1/4W 10K	1	
R109,10	ERX1SJ4R7	1W 4.7	2	
R201	ERG1SJ561	1W 560	1	
R202	ERDS2FJ103	1/4W 10K	1	
R203	ERDS2FJ470	1/4W 47	1	
R204	ERDS2FJ272	1/4W 2.7K	1	
R205	ERDS2FJ124	1/4W 120K	1	
R206	ERDS2FJ183	1/4W 18K	1	
R207	ERDS2FJ563	1/4W 56K	1	
R208	ERDS2FJ224	1/4W 220K	1	
R209	ERDS2FJ334	1/4W 330K	1	
R210	ERDS2FJ183	1/4W 18K	1	
R211	ERDS2FJ472	1/4W 4.7K	1	
R212	ERDS2FJ151	1/4W 150	1	
R213	ERDS2FJ122	1/4W 1.2K	1	
R214	ERDS2FJ223	1/4W 22K	1	
R215	ERDS2FJ472	1/4W 4.7K	1	
R216	ERDS2FJ154	1/4W 150K	1	
R217	ERDS2FJ223	1/4W 22K	1	
R218	ERDS2FJ102	1/4W 1K	1	
R219	ERDS2FJ332	1/4W 3.3K	1	
R220	ERDS2FJ221	1/4W 220	1	
R221	ERDS2FJ471	1/4W 470	1	
R222	ERDS2FJ391	1/4W 390	1	
R301	ER0S2TKG2701	1/4W 2.7K	1	
R302	ERDS2FJ471	1/4W 470	1	
R303	ERDS2FJ822	1/4W 8.2K	1	
R304	ERDS2FJ561	1/4W 560	1	
R305	ERDS2FJ181	1/4W 180	1	
R306	ERDS2FJ223	1/4W 22K	1	
R307	ERDS2FJ272	1/4W 2.7K	1	
⚠R401	ERDS1FJ152	1/2W 1.5K	1	
⚠R601	ERDS1FJ4R7	1/2W 4.7	1	
S201,02	EVQPXR04K	SW,SPEED SELECTOR 33/45	2	
S203	SFDSS01GL13	SW,START/STOP	1	
S301	SFDZ122N11-3	SW,PITCH CONTROL RESET	1	(VR303)
S302	RSP2B010-1J	SW,PITCH RESET	1	
S401	SFDSD2MSL-C	SW,STYLUS ILLUMINATOR	1	
⚠S601	SFDSS5GL13P	SW,POWER	1	
⚠T1	SLT66DT15C	POWER,TRANSFORMER	1	
VR201	EVMK3GA00B54	VR,BRAKE ADJ.	1	
VR301	EVMH1GA00B23	VR,PITCH CONTROL,0% ADJ.	1	
VR302	EVMK3GA00B54	VR,PITCH CONTROL GAIN ADJ	1	
VR303	SFDZ122N11-3	VR,PITCH CONT.ADJ.	1	(S301)
X201	RSXB4M13J01	X'TAL OSCILLATOR(4.13MHZ)	1	

■ Cabinet Parts Location



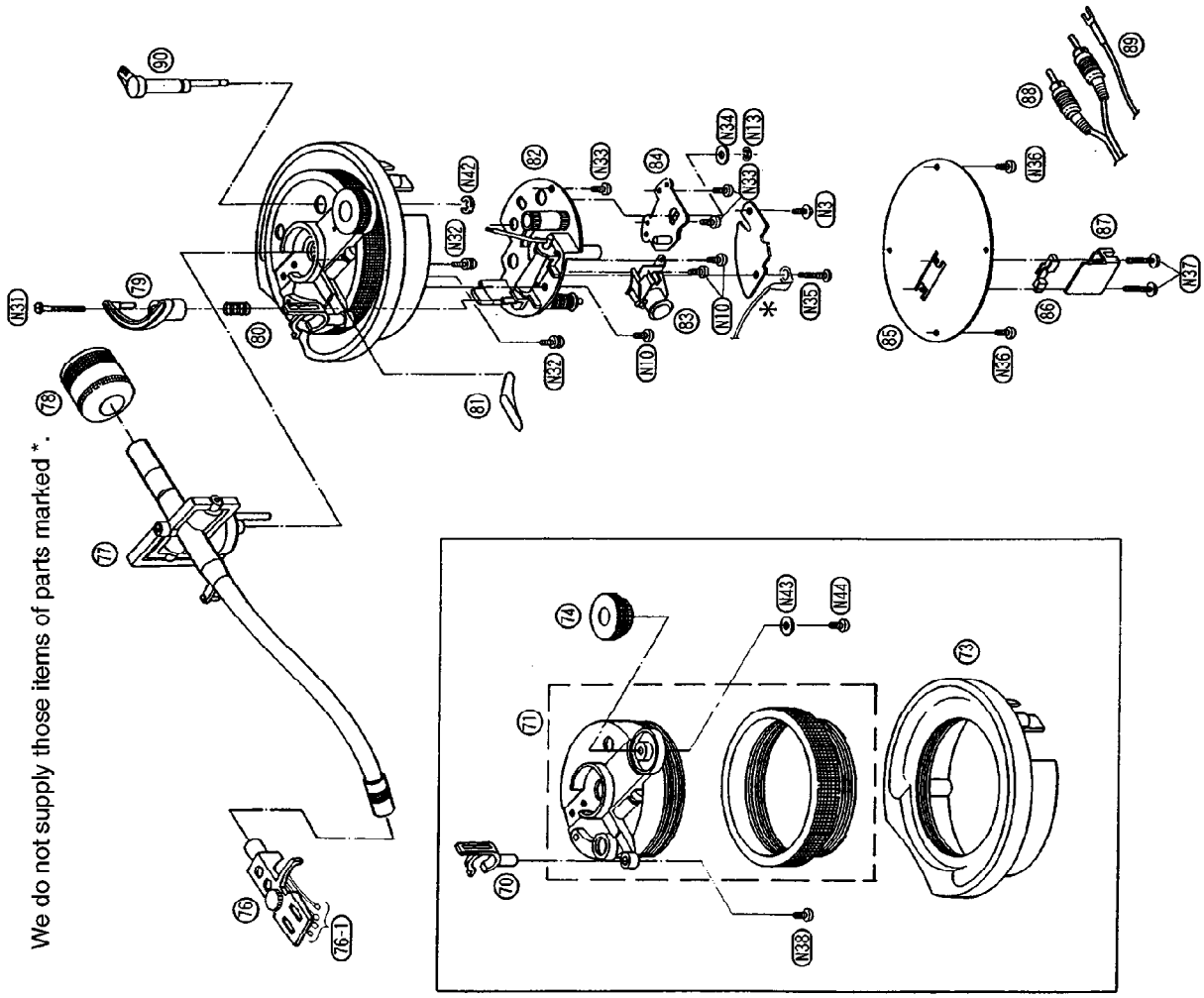
Ref.No.	Part No.	Part Name & Description	Pcs
1	SFAD122-01A	DUST COVER	1
2	RGS0008	T/T RUBBER MAT	1
3	SFTE172-01Z	TURNTABLE ASS'Y	1
4	SFUM172-053	PANEL COVER	1
5	SFMGQ20-01	DRIVE COIL COVER	1
6	SFMG520-31A	DRIVE COIL ASS'Y	1

Ref.No.	Part No.	Part Name & Description	Pcs
7	SFMZ172-01E	FG COIL ASS'Y	1
8	SFMZQ20-01A	SHAFT ASS'Y	1
9	RFKN1200M3DP	POWER SW KNOB ASS'Y	1
10	SFKT015-061	BUTTON,START/STOP	1
11	SFKT015-011E	BUTTON,SPEED SELECTOR(33)	1
12	SFKT015-021E	BUTTON,SPEED SELECTOR(45)	1
13	SFDJ122-02E	WIRE ASS'Y	1

Ref.No.	Part No.	Part Name & Description	Pcs
14	SFDJ122-06E	WIRE ASS'Y	1
15	RGK0942Z-S	COVER,STROBE ILLUMINATOR	1
16	SFQA122-01	SPRING	1
17	RMR1111A-K	BASE,OPERATION	1
18	SFUM122-03	CAM,POWER SWITCH	1
19	SFUM015-11	SPACER,LED	2
20	SFYB5-32	BALL	1

● Tonearm section

We do not supply those items of parts marked *.

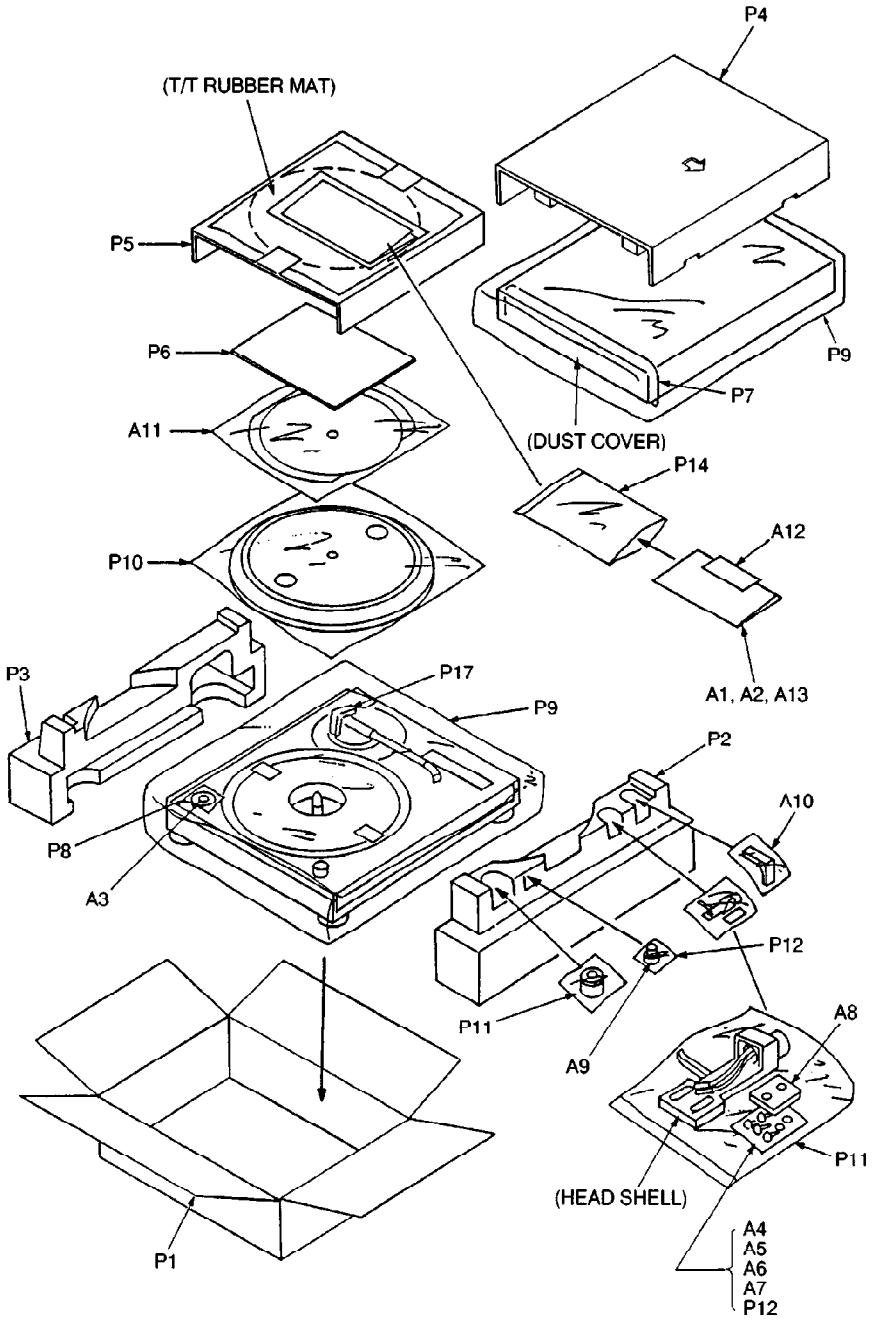


Ref.No.	Part No.	Part Name & Description	Pcs
21	SFQA520-01	SPRING	1
22	SFKK172-01	COVER,STYLUS ILLUMINATOR	1
23	SFXB122-06	DRIVE BOSS	1
24	SFQA172-01	SPRING	1
25	SFXJ172-01	PIN,LOCK CANCELER	1
26	SFQA520-011	SPRING	1
27	SFX0172-01-1	PIN,GUIDE	1
28	SFUP122-02E	BRACKET,ILLUMINATOR	1
30	SFUP122-03	PLATE,LOCK OPERATION	1
31	SFQA122-02	SPRING	1
32	SFXJ172-05	PIN	1
33	RMG0483-K	RUBBER,DUST COVER	2
35	SFUP122-09	HOLDER,LED	1
36	SFUP122-01	BRACKET,PITCH CONTROL	1
37	SFDJ122-04E	WIRE ASS'Y	1
38	SFUP122-15-1	STOPPER,SPRING	1
40	RKM0101D-S	CABINET	1
41	SFUM172-04	ORNAMENT,ILLUMINATOR	1
44	SFUP122M12E2	AC CORD ASS'Y	1
45	SFKT122-02	KNOB,PITCH CONTROL	1
46	RGH0131-S1	ORNAMENT,PITCH CONTROL	1
47	SFUZ122-01	FELT	1
51	SFGC122-01	RUBBER	3
53	SFAU122-032	BOTTOM COVER B	1
54	SFAU122-022	BOTTOM COVER A	1
55	RGN1655-K	NAME PLATE for U.S.A.	1
55	RGN1656-K	NAME PLATE for Canada.	1
57	SFUP122-233	SUPPORTER(A)	2
60	SFGC122-04E	INSULATOR	4
70	SFPRT17201K	ARM REST	1
71	RFKN1200MK2A	ARM BASE ASS'Y	1
73	SFPKD12201	BRACKET,ARM BASE	1
74	SFPAB17206	KNOB,ANTI-SKATING CONTROL	1
76	SFPCC31005K	HEAD SHELL	1

Ref.No.	Part No.	Part Name & Description	Pcs
76-1	REZ1037-1	WIRE KIT	1
77	P-AM18201K	TONEARM ASS'Y	1
78	SFPWG17201K	BALANCE WEIGHT	1
79	SFPRT18201K	ARM LIFT	1
80	SFQA829-03	SPRING	1
81	SFPAB13202	KNOB,LIFT	1
82	SFPAB18201K	TONEARM FIXING PLATE	1
83	SFPJL18202K	OIL DAMPER	1
84	SFPZB12201K	PLATE	1
85	SFPZB12203	PLATE,ARM BASE COVER	1
86	SFUM170-06	SPACER,PHONO CORD	1
87	SFPZB12204	CLAMPER,PHONO CORD	1
88	RJL2P001B12	PHONO CORD	1
89	SFEL026-01E1	GROUND WIRE	1
90	SFPZB17202	KNOB,ARM LOCK	1
91	N092	SPACER	1
92	RGU0611 S	BUTTON,PITCH CONT.RESET	1
93	RMR0945-K	PLATE,PITCH CONTROL RESET	1
94	RMX0124	SPACER	1
96	SFGZ122-021	RUBBER	1
98	SFXW172-032	SPACER,PITCH CONTROL	1
99	REZ0836	FLAT CABLE	1
101	SFUZ122-04	SHEET	1
104	RMR1112-K	SHELL STAND	1
105	RQLC0142	TECHNICS LABEL	1
N1	XTN3+8JFZ	SCREW	5
N2	SFXGQ20-02	SCREW	3
N3	XTW3+8T	SCREW	4
N4	XTB3+8J	SCREW	13
N5	SFXG172-01	SCREW	3
N8	SNSB10	SCREW	3
N9	XYN3+C6S	SCREW	2
N10	XTN3+6J	SCREW	4

Ref.No.	Part No.	Part Name & Description	Pcs
N11	XWE4D10BW	WASHER	1
N12	XTBS26+8J	SCREW	2
N13	XUC25FY	WASHER	2
N14	SFXW910J02	WASHER	1
N16	XTB3+10JFZ	SCREW	4
N17	XUC3FY	WASHER	2
N18	XTV3+8G	SCREW	1
N19	XSN17+3FY	SCREW	1
N20	SFXW122-03	WASHER	1
N21	XUC2FT	WASHER	1
N22	XWE3D8	WASHER	1
N23	XYN3+C15S	SCREW	1
N24	RTW-12	WASHER	1
N25	XSN2+10	SCREW	2
N26	SFXG122-01	SCREW	4
N27	SFXG122-02	SCREW	11
N28	SNSB9-2	SCREW	6
N29	XTW3+15T	SCREW	10
N31	SFXG829-1	SCREW	1
N32	XYN3+C10S	SCREW	2
N33	XTW3+6T	SCREW	3
N34	XWE4A10BW	WASHER	1
N35	XTN3+25J	SCREW	1
N36	XTB3+6JFZ	SCREW	2
N37	XTW3+12TFZ	SCREW	2
N38	XTN3+8J	SCREW	1
N39	XTV23+10G	SCREW	1
N40	XTN26+6J	SCREW	3
N41	XWE3F6	WASHER	2
N42	XUC5FY-V	WASHER	1
N43	SFPEW17201	WASHER	1
N44	XTW26+6S	SCREW	1

■Packaging



Ref.No.	Part No.	Part Name & Description	Pcs
A1	RQT4912-P	O/I BOOK	1
A1	RQT4913-C	O/I BOOK	1
A2	RQA0149	WARRANTY CARD	1
A2	SQX7183	WARRANTY CARD	1
A3	SFWE010	EP record ADAPTOR	1
A4	RHN26003	NUT,CARTRIDGE	2
A5	SFCZV8801	SCREW,CARTRIDGE	2
A6	SFPEV9801	SCREW,CARTRIDGE	2
A7	SFPEW9601	WASHER	2
A8	SFPZB3501	SHELL WEIGHT	1
A9	SFPWG17202	AUXILIARY WEIGHT	1
A10	SFK0135-01	OVERHANG GAUGE	1
A11	RGS0005Z	DISC SLIP SHEET ASSY	1
A12	RQLC0142	TECHNICS LABEL	1
A13	RQCB0391	SERVICENTER LIST	1
A13	RQCB0832	SERVICENTER LIST	1

Ref.No.	Part No.	Part Name & Description	Pcs
P1	RPG4326	PACKING CASE	1
P2	SFHH122-011	CUSHION,FRONT	1
P3	SFHH122-02	CUSHION,REAR	1
P4	SFHD122N05	PAD,TOP	1
P5	SFHD122-02	PAD(A)	1
P6	RPN0306	PAD(B)	1
P7	RPH0133	PROTECTION SHEET	1
P8	SFHZ122-01	PROTECTION SHEET	1
P9	XZB60X65A01X	PROTECTION BAG	2
P10	XZB45X50A01X	PROTECTION BAG	1
P11	SFYF09A15	PROTECTION BAG	2
P12	XZB05X06C03	PROTECTION BAG	2
P14	XZB25X34C03X	POLYETHYLENE COVER	1
P17	RPQ0608	PAD,TONEARM	1